

U.S. Department of Transportation

Federal Highway Administration

Highway Safety Performance- 1988

## Fatal and Injury Accident Rates on Public Roads in the United States

June 1990 (covers '88 state)

Prepared by the Offices of Highway Safety and Highway Information Management

Publication Number FHWA-SA-90-029

A report of the Secretary of Transportation to the United States Congress pursuant to Section 207 of the Surface Transportation Assistance Act of 1982 (P.L. 97–424)

## **FOREWORD**

This report was prepared pursuant to Section 207 of the Surface Transportation Assistance Act of 1982 (P.L. 97-424) which reads as follows:

Sec. 207. The Secretary of Transportation shall prepare, publish, and submit to Congress not later than December 31 of each calendar year beginning after December 31, 1982, a report on the highway safety performance of each State in the preceding calendar year. Such report shall provide data on highway fatalities and injuries and motor vehicle accidents involving fatalities and injuries and travel in urban areas of each State for each system of highways and in rural areas of such State for each system of highways. Such report shall be in such form and contain such other information on highway accidents as will permit an evaluation and comparison of highway safety performance of the States. For purposes of this section (1) the systems of highways in a State are the Federal-Aid primary system, the Federal-Aid secondary system, the Federal-Aid urban system, and the Interstate System (as such terms are defined in section 101 of Title 23, United States Code) and the other highways in such State which are not on the Federal-Aid system, and (2) the terms "State," "rural areas," and "urban area" have the meaning such terms have under such section 101.

This is the seventh report to Congress under Section 207. The reports contain an extension of a series of statistical data published annually since 1967 by the Federal Highway Administration (FHWA) as "Fatal and Injury Accident Rates on Federal-Aid and Other Highway Systems," until 1982 when it assumed its present title. The series has been a cooperative effort of the FHWA's Offices of Traffic Operations, Highway Safety, and Highway Information Management. The Office of Highway Information Management is the former Office of Highway Planning, Highway Statistics Division. The States have provided the data for this series through the Highway Performance Monitoring System (HPMS), and its predecessors, administered by the Office of Highway Information Management. Data from the Fatal Accident Reporting System (FARS) administered by the National Highway Traffic Safety Administration (NHTSA) have been used to verify the HPMS data.

## SUMMARY

This report presents data which can be used in the evaluation of the highway safety performance of the States. The data were submitted by the States through the Highway Performance Monitoring System operated by the Federal Highway Administration. The traffic accident statistics for 1988 show an increase of about 700 fatalities over 1987. A disproportionate share of these fatalities occurred on non-Federal-Aid collector and local highways. The overall fatality rate per 100 million vehicle miles of travel was 2.32, which was lower than the record low of 2.41 set in 1987.

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U.S. DEPARTMENT OF TRANSPORTATION Federal Highway Administration Washington, D.C. 20590

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HIGHWAY SAFETY PERFORMANCE - 1988

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U.S. DEPARTMENT OF TRANSPORTATION Federal Highway Administration Washington, D.C. 20590 Digitized by the Internet Archive in 2013

## TABLE OF CONTENTS

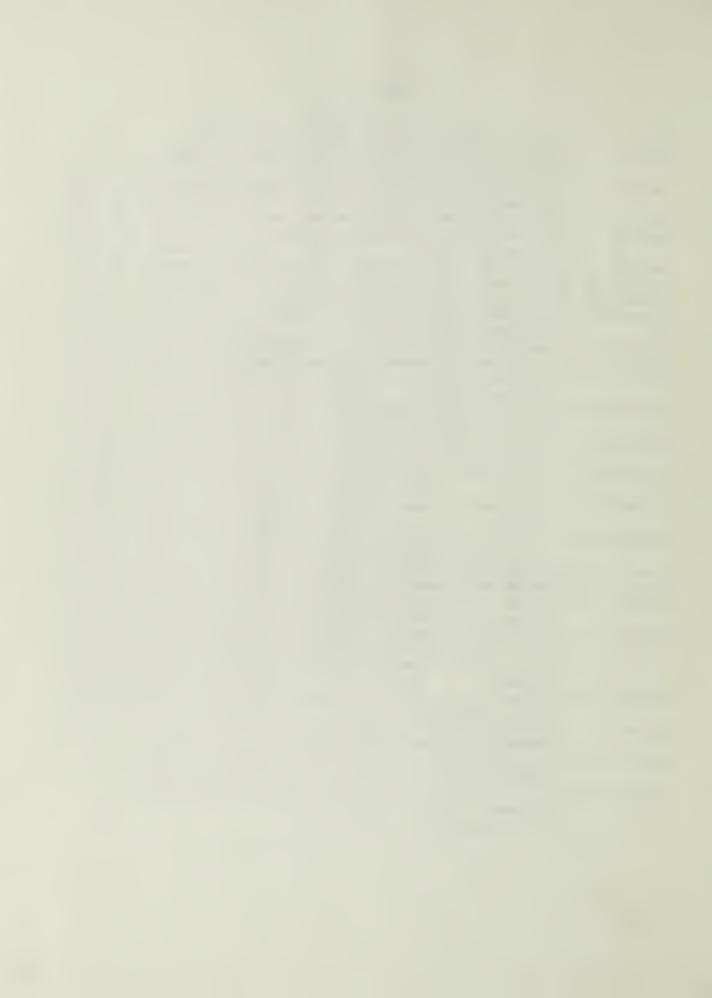
SECTION I Introduction	1
A. Purpose of Report B. Terminology C. Highway Safety Performance in 1988 D. National Trends E. Comparison of State Statistics	1 4 7 13
SECTION II Vehicle Mileage Rates	15
SECTION III Other Rates	45
A. Highway Mileage B. Population C. Licensed Drivers D. Registered Vehicles	45 45 45 45
SECTION IV Puerto Rico and U.S. Territories	51
SECTION V Relationship of Fatality Rates to Travel Density	53
SECTION VI State Fatality Rate Trends	75
SECTION VII Summary	87
References	89

## TABLES

Table	1	U.S. Vehicle Mile Rates by Highway System	5
Table	2	State Accident Summary	6
Table	3	Fatal Accidents by State and Highway System	
Table	3-A		16
Table	3-B	Other Federal-Aid Primary Highways	17
Table	3-C	Federal-Aid Urban Highways	18
Table	3-D		19
Table	3-E		20
Table		Non-Federal-Aid Collector Highways	21
Table	3-G	Non-Federal-Aid Local Highways	22
Table	4	Nonfatal Injury Accidents by State and Highway System	
Table		Federal-Aid Interstate Highways	23
Table		Other Federal-Aid Primary Highways	24
Table	4-C	Federal-Aid Urban Highways	25
Table	4-D	Federal-Aid Secondary Highways	26
Table	4-E		27
Table	4-F	Non-Federal-Aid Collector Highways	28
Table	4-G	Non-Federal-Aid Local Highways	29
Table	5	Fatalities by State and Highway System	
Table	5-A	Federal-Aid Interstate Highways	30
Table	5-B		31
Table	5-C	Federal-Aid Urban Highways	32
Table	5-D		33
Table	5-E	Non-Federal-Aid Arterial Highways	34
Table	5-F	Non-Federal-Aid Collector Highways	35
Table	5-G	Non-Federal-Aid Local Highways	36
Table	6	Nonfatally Injured Persons by State and Highway System	
Table	6-A	Federal-Aid Interstate Highways	37
Table	6-B	Other Federal-Aid Primary Highways	38
Table	6-C	Federal-Aid Urban Highways	39
Table	6-D	Federal-Aid Secondary Highways	40
Table	6-E	Non-Federal-Aid Arterial Highways	41
Table	6-F	Non-Federal-Aid Collector Highways	42
Table	6-G	Non-Federal-Aid Local Highways	43
Table	7		46
Table		Fatal and Injury Accident Data Related to Population	47
Table	9	Fatal and Injury Accident Data Related to Licensed	
		Drivers	48
Table	10	Fatal and Injury Accident Data Related to Vehicle	
		Registrations	49

## FIGURES

Figure	1	U.S. Motor Vehicle Fatality Rates (1925-1988)	8
Figure	2	U.S. Fatality Rates for Interstate and Other Highway	
		Systems (1967-1988)	9
Figure	3	U.S. Injury Rates for Interstate and Other Highway	
		Systems (1967-1988)	10
Figure		U.S. Fatality Rates by Highway System (1978-1988)	11
Figure	5	U.S. Nonfatal Injury Rates by Highway	
<b>n</b> .		System (1978-1988)	12
Figure		Relationship Between Fatality Rates and Travel Density	14
		Provisional Rate-Density RelationshipAll Highways	56
		Fatality Rate by StateAll Highways	57
Figure	/-BI	Provisional Rate-Density RelationshipRural	58
Figuro	7-P2a	and Urban Highways Fatality Rate by StateAll Rural Highways	59
		Fatality Rate by StateAll Urban Highways	60
		Provisional Rate-Density Relationship	00
riguie	, 014	Interstate System	61
Figure	7-C1b	Provisional Rate-Density Relationship	01
1 1841 0	, 015	Rural Interstate System	62
Figure	7-C1c	Provisional Rate-Density Relationship	
O		Urban Interstate System	63
Figure	7-C2a	Fatality Rate by StateRural Interstate	
_		Highways	64
Figure	7-C2b	Fatality Rate by StateUrban Interstate	
		Highways	65
Figure	7-D1	Provisional Rate-Density RelationshipOther	
		Federal-Aid Primary Highways	66
Figure	7-D2a	Fatality Rate by StateOther Rural	
	7 701	Federal-Aid Primary Highways	67
Figure	/-D2b	Fatality Rate by StateOther Urban	<i>(</i> 0
Edamas	7 F.1	Federal-Aid Primary Highways	68
rigure	/-E1	Provisional Rate-Density RelationshipFederal-	69
Figuro	7-F2a	Aid Secondary and Urban Systems Fatality Rate by StateFederal-Aid Secondary	09
rigure	/ "E2a	Highways	70
Figure	7-E2b	Fatality Rate by StateFederal-Aid Urban	, 0
116010	, 525	System Highways	71
Figure	7-F1	Provisional Rate-Density Relationship	
-6		Non-Federal-Aid Highways	72
Figure	7-F2a	Fatality Rate by StateRural Non-Federal-Aid	
		Highways	73
Figure	7-F2b	Fatality Rate by StateUrban Non-Federal-Aid	
		Highways	74
Figure	8	State Fatality Rates (1984-1988)	76



## HIGHWAY SAFETY PERFORMANCE - 1988

## SECTION I -- INTRODUCTION

## A. Purpose of Report

In response to the Congressional direction given in the Surface Transportation Assistance Act of 1982, this report provides motor vehicle traffic accident data which may be used, together with other relevant information, in evaluating and comparing the highway safety performance of the States. It is not the purpose of this report to present either a detailed analysis of the data or a completed evaluation or comparison of State highway safety performance. The text of the report is primarily technical detail and background information which may assist those who analyze or interpret the statistical tables and graphs.

## B. Terminology

Definitions serve to describe terms which are not in common use and to clarify the intended meaning of familiar terms which may be ambiguous. Interpretation of laws is greatly facilitated by the use of carefully defined terminology. Similarly, the interpretation of statistics is dependent upon an understanding of the terminology used in the collection and processing of the data. Such an understanding is particularly important when statistics from two or more sources are combined or compared. For this reason, an explanation of pertinent terminology precedes the statistical data in this report.

The two primary sources for the definitions which follow are Section 101 of Title 23 of the United States Code and the Manual on Classification of Motor Vehicle Traffic Accidents (ANSI D16.1-1989). The accident data in this report have been collected and processed by thousands of persons in State and local agencies and that deviations from the standard definitions are not unusual. Most of the deviations are relatively minor, but some are not. Users of accident statistics should be constantly alert to the fact that statistical differences may reflect differences in terminology rather than differences in accident experience.

Terms used in this report are defined as follows:

A motor vehicle traffic accident is an accident involving a motor vehicle in use within the right-of-way or other boundaries of a trafficway open for the use of the public.

An <u>injury</u> is any bodily harm received by a person in a motor vehicle traffic accident.

A fatal injury is any injury that results in death.

A nonfatal injury is any injury other than a fatal injury.

A <u>fatal accident</u> is a motor vehicle traffic accident resulting in one or more fatal injuries.

A <u>nonfatal injury accident</u> is a motor vehicle traffic accident that results in one or more injuries, but no fatal injuries.

A <u>fatality</u> is the death of any person who suffers a fatal injury. For its statistics on motor vehicle traffic fatalities, the Department of Transportation uses a 30-day counting rule, including only those deaths which occur within 30 days of the fatal injury. Approximately two percent of traffic fatalities occur later.

A <u>nonfatally injured person</u> is one who suffers a nonfatal injury in either a fatal accident or a nonfatal injury accident.

<u>Vehicle miles</u> are the miles of travel by all types of motor vehicles, as determined by the State highway departments on the basis of actual traffic counts and established estimating procedures.

The <u>fatal accident rate</u>, <u>nonfatal injury accident rate</u>, <u>fatality rate</u>, and <u>nonfatal injury rate</u> are, respectively, the number of fatal accidents, nonfatal injury accidents, fatalities, and nonfatally injured persons per 100 million vehicle miles of travel.

An <u>urban highway</u> is any road or street within the boundaries of an urban area. An urban area is an area including and adjacent to a municipality or urban place with 5,000 or more population. The boundaries of urban areas are fixed by the State highway departments, subject to the approval of the Federal Highway Administration, for purposes of the Federal-Aid highway program.

A rural highway is any road or street which is not an urban highway.

<u>Travel density</u> is the average number of vehicle miles driven on a section of highway each day divided by the length of the section in miles. It is expressed as a number of vehicles and may be referred to as average daily traffic (ADT).

The provisional rate-density relationship is the relationship between fatality rates and average daily traffic. It is based on data for the 4-year period preceding the calendar year for which detailed data are reported. It is labelled "provisional" to make it clear that it is to be used as a guide rather than a standard. A provisional rate-density relationship may be described graphically or mathematically by a rate-density curve.

A provisional range for a given period of time is based on a provisional rate-density relationship and the volume of travel. The provisional range indicates—for an appropriate volume of travel—the amount of deviation from fatality rates on a rate-density curve which might be expected if the deviation were random.

The characteristics of the functional classes of highways referred to in this compilation of statistical data are briefly described as follows:

<u>Arterial</u> highways serve major traffic movements or major traffic corridors. While they may provide access to abutting land, their primary function is to serve traffic moving through the area.

<u>Local</u> highways are those roads and streets whose principal function is to provide direct access to abutting land.

<u>Collector</u> highways are those highways which link local highways to arterial highways.

The characteristics of the several Federal-Aid highway systems referred to in this report are briefly described as follows:

Federal-Aid Primary, Secondary, and <u>Urban</u> highway systems are those for which Federal-Aid highway matching funds may be spent by the State.

The <u>Federal-Aid Primary</u> system is a system of connected main roads important to interstate, statewide, and regional travel, consisting of rural arterial routes and their extensions into or through urban areas.

The <u>Interstate System</u> is a part of the Federal-Aid Primary system. It is a system of freeways (i.e., expressways with fully controlled access) connecting and serving the principal cities of the United States.

The Federal-Aid Secondary system consists of rural major collector routes.

The <u>Federal-Aid Urban</u> system consists of urban arterial and collector routes, exclusive of urban extensions of the Federal-Aid Primary system.

The fatality statistics in this report differ somewhat from those reported elsewhere. For its motor vehicle traffic fatality statistics, the Department of Transportation (DOT) uses a 30-day counting rule. 1/ Under this rule, deaths resulting from an accident are counted only if they occur within 30 days of the accident. Traffic fatalities are listed by the time and place of the fatal accident. Similar statistics published by the National Center for Health Statistics (NCHS) are listed by the time of death and place of residence of the deceased, using a 12-month counting rule.

<sup>1/</sup> Federal Highway Administration/National Highway Traffic Safety Administration; "Highway Fatality Counting Rule"; Federal Register, Volume 43, No. 191; pp. 45486-45488; October 2, 1978.

Another difference in the reporting of fatalities which result from motor vehicle accidents is the treatment of deaths resulting from nontraffic accidents. Examples of motor vehicle nontraffic accidents are those which occur in the driveways of private homes or in other locations outside the rights-of-way or other boundaries of roads which are open for public use. Annual motor vehicle fatality figures for the United States reported by NCHS and the National Safety Council (NSC) generally include about 1,000 nontraffic fatalities--deaths which are not included in DOT reports.

The number of nonfatally injured persons is also counted in a variety of ways. In this publication the number of injured persons is the number reported by police. The NSC, for comparability with injuries from industrial and other accidents, reports the number of persons disabled beyond the day of the accident. Another approach is taken in the National Health Survey by the Bureau of Census. In the National Health Survey, the estimated number of injuries is based on responses to household interviews. National Health Survey injury figures tend to be about twice as high as those reported by NSC. The police-reported figures used in this publication are midway between the others.

## C. Highway Safety Performance in 1988

The traffic accident statistics for 1988 show an increase of about 700 fatalities over 1987. A disproportionate share of these fatalities occurred on non-Federal-Aid collector and local highways. The overall fatality rate per 100 million vehicle miles of travel was 2.32, which was lower than the record low of 2.41 set in 1987.

Table 1 contains travel and accident data by highway system for the United States. It is a summary of the detailed data contained in Tables 2 through 6. Estimates have been included where data reported by the States were incomplete. Only one State, Tennessee, was unable to submit any nonfatal injury accident data in time for inclusion in this report. South Dakota, South Carolina and North Carolina were unable to submit nonfatal accident data for each highway system in time for publication.

The data permit comparison of numbers and rates (per 100 million vehicle miles) for accidents and casualties on Federal-Aid and other highway systems. Fatality rates on the Interstate System are less than half of that for other highway systems, even though a little more than one-fifth of all highway travel in the United States occurs on the Interstate System.

Table 2 contains a summary of travel and accident data, including pedestrian data, by State. Pedestrian fatality rates remain virtually unchanged at 0.35 (per 100 million vehicle miles) over a 3-year period. The pedestrian injury rate declined by about 4 percent from 1985. The data are presented in greater detail in Tables 3 through 6. The number of pedestrians injured, fatally or nonfatally, are reported for each State together with pedestrian injury rates.

## TABLE 1. U.S. VEHICLE MILE RATES BY HIGHWAY SYSTEM - 1988

REONS 4/	RATE 3/	41.03 69.19 57.59	117.46 171.30 142.70	240.00 220.36 236.71	150.93	606.07 124.92 183.98	195.53 115.21 170.63	314.18 360.93 345.04	105.46 174.04 146.23	278.20 308.68 296.62	165.70 235.59 207.34	137.66 199.96 174.81	PTEMBER E FOR L-A10 INJUREO 1, ' NOT
NONFATALLY INJUREO PERSON	NUMBER	74,378 178,966 253.344	362.297 466.202 828.499	888.367 164.187 1,052.554	264,775	21,807 32,128 53,935	107,667 28,506 136,173	294.526 657.193 951.719	701.450 1.697.722 2.399.172	424,000 717,827 1,141,827	1,051,072 2,236,583 3,287,655	1,125,450 2,415,549 3,540,999	S AS OF SEPTE S WERE HADE F OR FEOERAL-F ONFATALLY IN. H CAROLINA, .
FATALITIES	RATE 3/	1.56 0.89 1.17	3.48 1.56 2.58	2.03 1.65 1.96	3.86	8.20 1.16 2.03	4.02 1.27 3.17	5.16 1.93 3.03	3.06 1.57 2.17	4.82 1.77 2.98	3.91 1.80 2.65	3.39 1.61 2.32	RATION ESTINATE LETE FUNCTIONAL VEHICLE MILES. ACCIOENTS AND N TENNESSEE. SOUT LESS OUE TO COMP
FATAL	NUMBER	2.826 2.301 5.127	10.748 4.252 15.000	7.496 1.230 8.726	6.771	295 299 594	2.214 313 2.527	4.839 3.509 8.348	20.345 15.279 35.624	7.348 4.121 11.469	24.867 17.099 41.966	27.693 19.400 47.093	REGMINE SU THINISTRATI TE COMPLETE NJURY ACCI NJURY ACCI INA. PLEAS
INJURY IS 4/	RATE 3/	25.07 45.13 36.86	69.43 107.31 87.19	157.30 149.69 156.03	95.32	353.94 79.86 113.50	130.20 76.69 113.61	211.65 247.56 235.35	64.17 113.03 93.22	185.58 210.83 200.83	104.30 155.49 134.98	86.80 131.85 113.67	THE HPMS AD BILLOHMAY BO SORIES WHER TO DIE NO MILLOHMAN BONNER BO WORTH CAROL MORTH CAROL MORTH CAROL MALS IN OTH
NONFATAL INJURY ACCIDENTS 4/	NUMBER	45.448 116.725 162.173	214.162 292.052 506.214	582.250 111.532 693.782	167,218	12,735 20,538 33,273	71,693 18,974 90,667	198.408 450.764 649.172	426.828 1,102.559 1,529,387	282.836 490.276 773.112	664.216 1.476.110 2.140.326	709.664 1.592.835 2.302.499	OF TRAVEL ARE FROM THE HPMS AREANIDE SU 30, 1989. FEDERAL HIGHMAY ADMINISTRATIC HAUDR HIGHMAY CATEGORIES WHERE COMPLETE SYSTEM OF ALCOMORY OF ALL TO WELL 3/ RAFES ARE PER 100 MILLION VEHIC A TOTALES OF NOMFARL INJURY ACCIDENCE OF THAM FOR TEMP SOUTH DAKOTA. AND NORTH CAROLINA. PLERS AGREE MITH U.S. TOTALS IN OTHER TABLES
AL ENTS	RATE 3/	1.32 0.82 1.02	2.97 1.45 2.26	1.87	3.44	7.31 0.99 1.76	3.62 1.17 2.86	4.73 1.73 2.75	2.64 1.45 1.93	4.39 1.59 2.70	3.44 1.66 2.37	2.97 1.48 2.08	OF TRE 30, 19 MAJOR SYSTEP SOUTH AGREE
FATAL ACC10ENTS	NUMBER	2.393 2.113 4.506	9.166 3.959 13.125	6.932 1.139 8.071	6.029	263 254 517	1.992 289 2.281	4.433 3.157 7.590	17.588 14.143 31.731	6.688 3.700 10.388	21.883 15.730 37.613	24.276 17.843 42.119	ANO RE 87 E E E E E
OR 1LY VEHICLE	PER MILE	14.873 62.399 26.934	3,733 22,302 6,123	11.014 3.687 8.263	1,198	3,917 8,498 7,431	456 3,023 618	120 962 284	2.757 13.903 5.269	168 1.160 348	561 3.562 1.132	713 4.463 1.430	PUERTO RICO F 15LANOS. LLY INJURED TATES WHICH BR TALS REPORTEO RY PERFORMANCE HWAY HILEAGE
VEHICLE	(MILLIONS)	181.284 258.662 439.946	308,438 272,160 580,598	370.152 74.509 444.661	175.429	3,598 25.718 29.316	55,063 24.742 79.805	93.745 182.085 275,830	665,151 975,483 1.640.634	152.406 232.545 384.951	636.273 949.366 1.585.639	817.557 1.208.028 2.025.585	COMMONAEALTH OF SHAPE AND VIRGIN ITS AND NON NON THE SHAPE OF THE STATE AND THE HIGHM FEORRIL-RIO HIGHMER AND THE STATE AND AND TH
НІСНИВУ	MILES 2/	33,303 11,326 44,629	225,724 33,343 259,067	91.826 55.210 147.036	400.081	2.510 8.269 10.779	330.258 22,360 352,618	2.139.793 517.140 2.656.933	659.108 191.705 850.813	2.472.561 547.769 3.020.330	3.098.366 728.148 3.826.514	3.131.669 739.474 3.871.143	S EXCLUDE THE CONTIGENCY SCHOOL OLD THE PRESTREEN OFFIT ALING TRBLES, TO TRAVEL ORTH RRESTREEN ORTH RESTREEN OFFIT ALING TRAVEL ORTH RRESTREEN OFFIT ALING TRAVEL ORTH RRESTREEN OFFIT ALING TRAVEL ORTH RESTREEN ORTH ALING TRAVEL
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## TABLE 2. STATE ACCIDENT SUMMARY - 1988

ALL Y	RATE 1/	2.47 4.04 4.22 5.27	6.93 3.55 5.43 3.11	33.77 7.51 3.99 10.00	2.39 13.17 3.75 3.63	5.51 4.67 4.27 3.66	8.89 7.04 5.42 4.30	2.00 4.96 2.27 4.56	10.68 3.89 11.62 4.36	21.35 1.38 1.73 6.20	1.98 1.94 8.68 3.98	3.53 2.25 3/ 3.52	12.88 4.11 3.76 4.16	4.86 5.16 1.73	6.54	6.47	
NONFATALLY INJUREO PEOESTRIANS	NUMBER	980 155 1,444 1,013	16.745 982 1.414 199	1.150 7.914 2.482 742	194 10.340 1.919 795	1.167 1.476 1.482 417	3.334 3.049 4.219 1.566	2.258 1.85 612	960 370 6.818 667	22.135 797 100 5.087	642 489 7.053 233	1.146	1.708 228 2.160 1.740	675 2.191 98	129,622	131.122	ES REPORTING NJUREO RAYEL, INJURY PEOESTRIANS
LLY RED RIANS	RATE 1/	0.29 0.56 0.58 0.22	0.43 0.16 0.28 0.41	0.73 0.59 0.36 0.40	0.16 0.35 0.19 0.16	0.14 0.23 0.34 0.27	0.39 0.33 0.32	0.36 0.22 0.20 0.16	0.52 0.14 0.41 0.55	0.55 0.38 0.17 0.23	0.21 0.27 0.32 0.38	0.37 0.21 0.26 0.29	0.31 0.13 0.23 0.23	0.35 0.17 0.09	0.34	0.34	5 FOR STATES NO FATAL INJIATES OF TRA
FATALLY INJUREO PEOESTRIANS	NUMBER	117 21 199 43	1.041 44 74 26	25 618 224 30	13 275 99 34	29 73 118 31	145 145 253 70	80 98 16 21	47 13 240 84	573 218 10 187	69 67 258 22	118 14 115 461	41 7 132 97	49 71 5	6.860	6,860	VEHICLE MILES FOR STATES REPORTALITIES AND FATAL INJURED S OATA. ESTIMATES OF TRAVEL. AND NONFATALLY INJURED PEDEST
ALLY E0 NS	RATE 1/	111.08 135.77 180.55 107.14	147.76 140.23 178.03 140.94	391.48 218.73 155.91 164.93	137.47 232.05 147.41 125.88	151.54 164.98 221.80 163.30	226.49 199.35 205.31 121.86	109.94 151.79 101.15	172.39 114.57 258.34 175.55	278.50 90.85 83.57 254.19	97.36 138.34 189.59 185.29	159.68 99.17 152.66	166.49 131.89 135.30 173.27	204.24 138.79 91.16	175.14	174.81	NCCIOENTS. FATALIT ICCIOENTS. FATALIT IS AND FARS OBTA.
NONFATALLY INJUREO PERSONS	NUMBER	44.081 5.215 61.832 20.591	356,945 38,795 46,398 9,026	13,330 230,367 97,073 12,236	11.172 182.121 75.360 27.577	32,067 52,158 76,925 18,618	84,928 86,388 159,932 44,415	24.235 69.173 8.232 22.214	15,496 10,892 151,569 26,829	288.780 52.643 4.818 208.414	31.532 34.866 154.018 10.845	50.713 6.579 2/ 238.845	22.081 7.324 77.735 72.449	28.357 58.929 5.158	3.470.276	3.540.999	981.392 ATAL ACC DN HPH5 NJUREO P
17165	RATE 1/	2.58 2.53 2.76 3.17	2.23 1.80 1.86 2.50	1.76 2.92 2.65 1.99	3.16 2.34 2.15 2.54	2.28 2.65 2.67 2.24	2.09 1.67 2.19 1.68	3.28 2.42 2.43 1.95	3.18 1.75 1.79 3.19	2.17 2.72 1.80 2.15	1.96 2.69 2.38 2.14	3.26 2.22 2.86 2.17	2.24 2.32 1.86 1.86	3.31 1.89 2.74	2.32	2.32	ON A TOTAL TRAVEL OF 1.5 THIS DATA. Z, ESTIMATES OF FI PECESTR MAS ARE BASEO ACCIDENTS. NOWFATALLY II MERE MADE BY FHMA.
FATAL1	NUMBER	1.023 97 944 610	5.390 497 484 160	3.078 1,653 148	257 1.837 1.101 557	483 838 925 255	782 725 1.704 612	1.103 1.103 198 261	286 166 1.051 487	2.255 1.573 1.763	634 677 1.931 125	1.034 147 1.266 3.393	297 129 1.071 778	460 807 155	47.093	47.093	ON A TOTAL THIS OBTA: 5/ E PEGESTRIAN ACCIOENTS: WERE MADE:
AL Y NTS	RATE 1/	75.58 91.12 112.82 58.28	97.48 92.61 126.90 89.76	271.25 135.10 101.78 117.39	87.78 156.69 97.17 87.29	101.42 108.07 113.15 111.10	137.12 153.33 134.88 84.35	58.94 97.50 67.52 111.08	113.10 81.42 163.95 112.10	189.71 55.03 59.27 154.28	62.16 85.61 123.39 145.77	97.81 67.15 3/ - 97.15	110.52 87.68 90.46 118.34	132.81 96.02 59.17	113.86	113.67	
NONFATAL 1NJURY ACC10ENTS	NUMBER	29.993 3.500 38.639 11.200	235.491 25.620 33.073 5.748	9.236 142.284 63.372 8.709	7.134 122.972 49.678 19.123	21,461 34,164 39,244 12,667	51.416 66.442 105.067 30.743	12.992 44.431 5.495 14.892	10.167 7.741 96.193 17.133	196.719 31.886 3.417 126.496	20.134 21.577 100.241 8.532	31.065 4.455 2/ 152.004	14.658 4.869 51.970 49.482	18.440 40.769 3.348	2.256.082	2.302.499	HE TOTAL OF CC10ENT, ES ARE 8ASEO
HTAL 10ENTS	RATE 1/	2.32 2.24 2.46 2.77	2.02 1.63 1.71 2.23	1.62 2.62 2.39 1.73	2.81 2.12 1.88 2.25	1.92 2.27 2.37 2.02	1.90 1.55 1.95	2.86 2.15 2.25 1.75	2.85 1.59 1.65 2.83	1.99 2.42 1.60 1.93	1.72 2.26 2.18 2.02	2.87 1.91 2.53 1.92	1.95 2.11 1.69 1.67	2.92 1.66 2.28	2.08	2.08	5. THE SUM REFLECTS TH THE NONFATAL INJURY ACI INJUREO PEOESTRIAN RATE
FAT ACC 10	NUMBER	921 86 844 532	4.873 450 446 143	2.758 1.487 128	228 1.666 959 494	406 717 822 230	711 673 1.522 543	631 978 183 234	256 151 966 433	2.063 1.401 1.584	557 569 1.770 118	910 127 1.116 3.002	258 117 971 700	405 704 129	42.119	42.119	THE SUR HE NONFATE
VEHICLE	IMILLIONSI	39.684 3.841 34.247 19.219	241.575 27.665 26.062 6.404	3.405 105.319 62.262 7.419	8.127 78.483 51.124 21.907	21.161 31.614 34.682 11.401	37,498 43,334 77,899 36,447	22.043 45.570 8.138 13.407	8.989 9.507 58.671 15.283	103,692 57.943 5,765 81.990	32,388 25,204 81,238 5,853	31,759 6,634 44,193 156,458	13,263 5,553 57,453 41,812	13.884 42.458 5.658	2,025,585	2,025,585	E MILES. TATE. O. NO PAGE 5. OOTNOTE 3. I
HIGHWAY		90.418 12.189 70.282 77.094	162.562 77.149 19.798 5.387	1.102 104.589 107.388 4.081	60,663 135,506 91,588 112.488	132.965 69.848 58.422 21.966	28.233 33.809 117.895 129.644	72.169 119.888 71.471 92.495	44.833 14.711 34.197 53.938	93.813 86.311 113.340	111,403 93,595 116,084 5,846	63.702 73.420 83.638 300.444	42.935 14.089 66.892 81.546	34.573 109.629 40.502	3.871.143	3.871.143	REPORTED 8Y S 101 BE COMPUTE MATES ARE SHO TABLE. SEE F PERSON. AND
STATE		AL ABAMA AL ASA A AR I ZONA ARRANSAS	CALIFORNIA COLORADO CONNECTICUT OELAWARE	015T. OF COL. FLORIOA GEORGIA HAWA11	10AH0 1LL 1N015 1N01ANA 10WA	KAN5AS KENTUCKY LOUISIANA MAINE	MARYLANO MASSACHUSETTS MICHIGAN MINNESOTA	M1SSISSIPP1 M1SSOUR1 MONTANA NEBRASKA	NEVAOA NEW HRMPSHIRE NEW JERSEY NEW MEXICO	NEW YORK NORTH CAROLINA NORTH ORKOTA OHIO	OKLAHOMA OREGON PENNSYLVANIA RHOOE 15LANO	SOUTH CAROLINA SOUTH OAKOTA TENNESSEE TEXAS	UTAH VERHONT VIRGINIA WASHINGTON	HEST VIRGINIA HISCONSIN HYDMING	Sun 4/	U.5.TOTAL 5/	17 PER 100 MILLION VEHICLE MILES. 27 ORTA NOT REPRREO 87 STATE. 37 RATE CRINDI 8E COMPUTED. 47 U.S. ESTIMATES ARE SHOWN ON PAGE ORTA SHOWN IN THIS TABLE. SEE FOOTNOTE 3. NONFATRILY INJUREO PERSON. AND NONFATRILY

## D. National Trends

From a rate of more than 18 fatalities per 100 million vehicle miles in the mid-1920's the average rate has gone down more than 3 percent per year to a record low rate of 2.32.

Figures 2 and 3 graphically illustrate national traffic fatality and injury rate trends from 1967 through 1988 for Interstate and other highway systems. Fatality rate trends were gradually downward for all systems through 1986. Although these trends were interrupted by relatively stable periods following a sharp drop in 1974, the downward movement resumed in 1981. In 1987 and 1988, fatality rates for rural Interstates rose and at the same time the fatality rates for urban roads off the Interstate system declined. In 1988, roads off the Interstate system in urban areas reached an all time low fatality rate of 1.80. The rural Interstate fatality rate of 1.56 in 1988 is still below the most recent high of 1.79 in 1981. Rates for urban Interstate and rural roads off the Interstate system remained nearly constant. Trends for reported injury rates have also been generally downward during the 1967-1988 period.

Figures 4 and 5 illustrate national fatality and injury rate trends from 1978 through 1988 by highway system. In the mid-1970's, non-Interstate Federal-Aid highway systems were realigned by adopting functional classifications as the basis for assignment of highways to each system. As a result of these changes, trend data are only available for a short period for most systems. The time period covered in Figures 4 and 5 corresponds largely with the period of relative stability which is apparent in Figures 2 and 3.

There are decreases in fatality rates for urban highways, both Federal-Aid and non-Federal-Aid, Federal-Aid Secondary and non-Federal-Aid rural. Also in Figure 4, a 2-year increase is seen for Interstate rural and a slightly smaller increase in 1988 for urban Other Federal-Aid Primary roads.

In 1988, forty States had raised their speed limit on certain rural Interstate roads from 55 mph to 65 mph as allowed by the Surface Transportation and Uniform Relocation Assistance Act of 1987, enacted April 2, 1987. The National Highway Traffic Safety Administration reported in October, 1989 in an evaluation of the effects of the higher speed limit that about one-third of the fatality increase on rural Interstates is attributed to greater vehicle miles of travel, and the remainder of the increase is attributed to other factors including greater speed.

The 1967 through 1981 data used in Figures 3 through 6 were published in the annual Federal Highway Administration reports, "Fatal and Injury Accidents on Federal-Aid and Other Highway Systems."

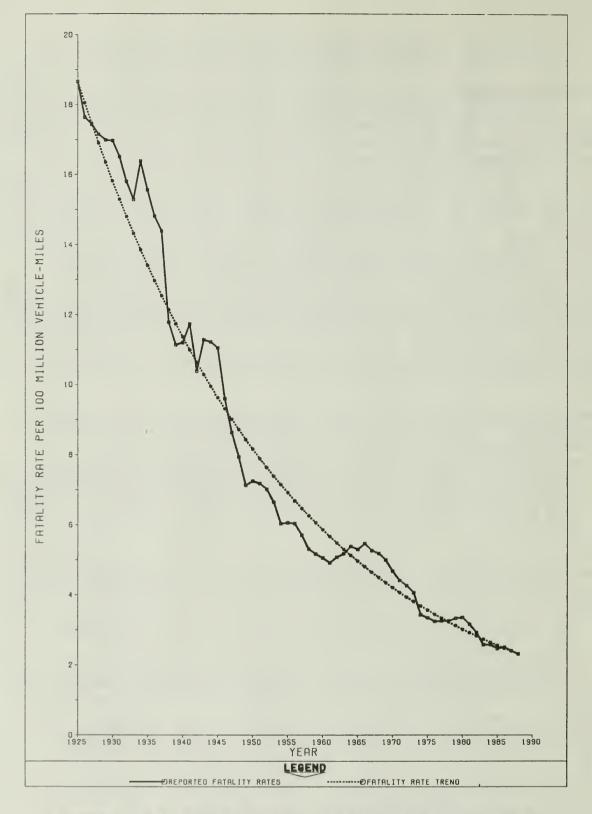


FIGURE 1. U.S. MOTOR VEHICLE TRAFFIC FATALITY RATES
(1925 - 1988)

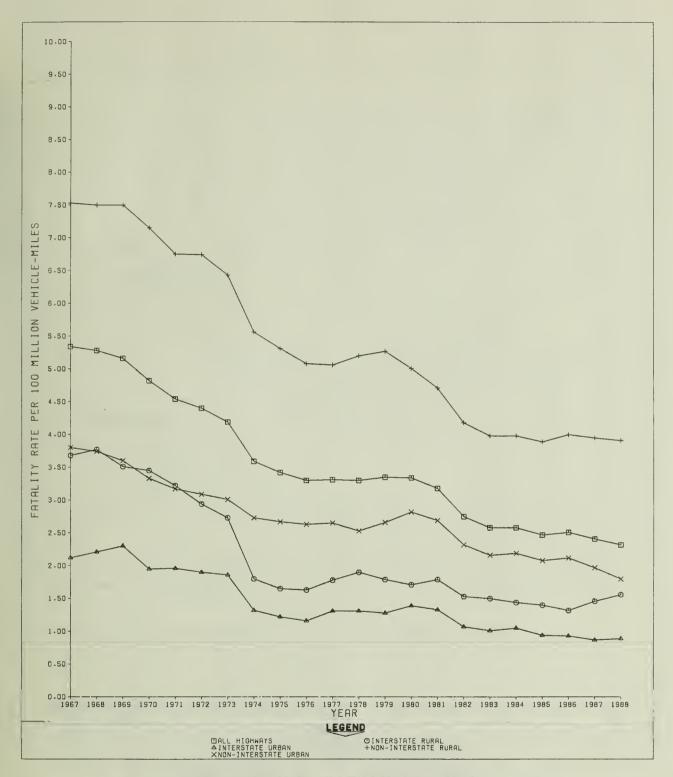


FIGURE 2. U.S. FATALITY RATES FOR INTERSTATE AND OTHER HIGHWAY SYSTEMS (1967 - 1988)

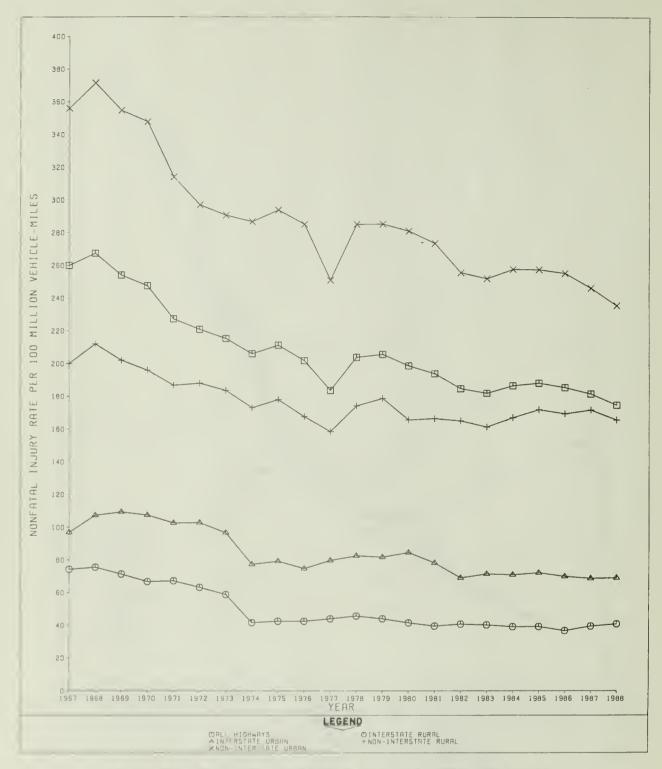


FIGURE 3. U.S. NONFATAL INJURY RATES

FOR INTERSTATE AND OTHER

HIGHWAY SYSTEMS (1967 - 1988)

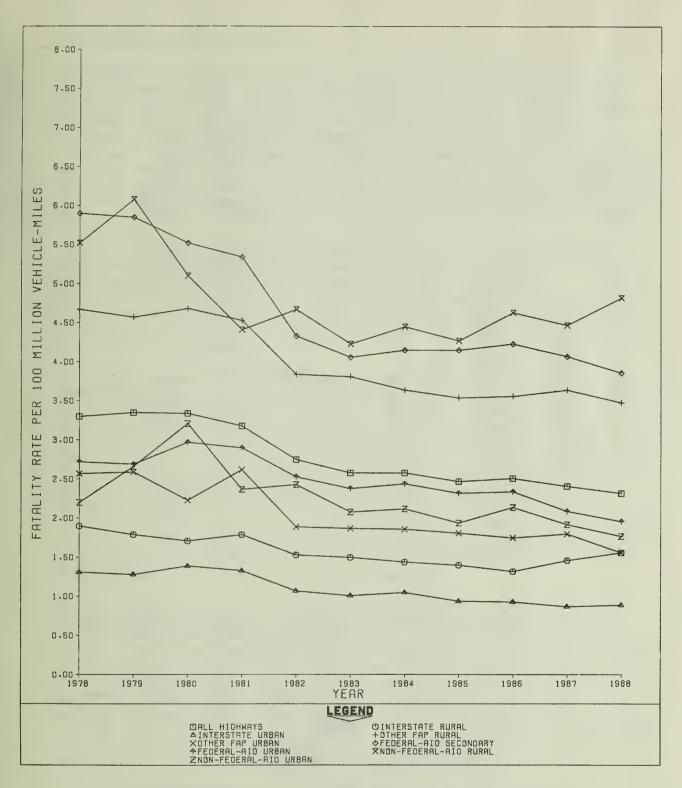


FIGURE 4. U.S. FATALITY RATES BY HIGHWAY SYSTEM (1978 - 1988)

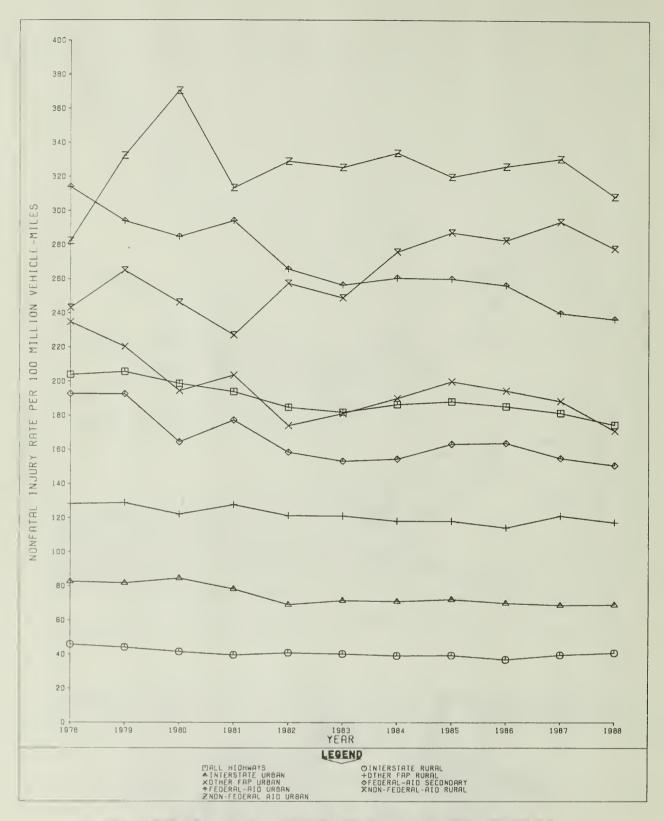


FIGURE 5. U.S. NONFATAL INJURY RATES BY HIGHWAY SYSTEM (1978 - 1988)

## E. Comparison of State Statistics

This report was prepared to help meet the need for statistical data to be used in comparing and evaluating the highway safety performance of the States. Those who use the report should be aware of some of the strengths and weaknesses of the data. For the most part, the data have been submitted by State highway departments through the FHWA's Highway Performance Monitoring System. Accident data originate in police accident reporting systems while the collection of travel and highway inventory data originate in the highway departments. The quality of the reported data is generally high but varies somewhat within the States. Not every State was able to summarize its accident data in time for inclusion in this report.

Because all States report accident and related data to FHWA through a single system, reported data are generally consistent. Differences due to variations in data collection procedures are usually marginal. Occasionally variations may be large enough to obscure or exaggerate real differences among the States. Evaluation of the highway safety performance of each State should include consideration of its record over a period of time as well as comparisons with other States.

One useful device for comparing fatality rates is the rate-density curve. Other things being equal, fatality rates in terms of fatalities per 100 million vehicle miles tend to be highest where the travel density—the ratio of vehicle miles to highway miles—is low. The general shape of the rate-density curve—concave upward and sloping downward to the right—is shown in Figure 6. Rate-density curves in the 1976 "Highway Safety Needs Study," a DOT report to Congress, were used to illustrate the fatality rate reduction resulting from the adoption of safer design standards for Interstate highways. Fatality rates are normally higher on lightly traveled segments of the Interstate System than on segments where traffic is heavier. Large and sparsely populated States will normally have higher fatality rates than States with relatively high concentrations of people and traffic.

When basic rate-density relationships are disregarded, evaluation of State highway safety performance is most often based on comparison of State fatality rates with national fatality rates. This tends to focus undue attention on sparsely populated States and encourages complacency in States which have high population and travel densities. A low-density State might have highly effective speed limit enforcement and highway safety improvement programs, for example, but still have fatality rates substantially above those of a high-density State with ineffective safety programs. In Sections V and VI of this report, rate-density relationships are used as a basis for fatality rate comparisons among States, by system, and within States, by year, respectively.

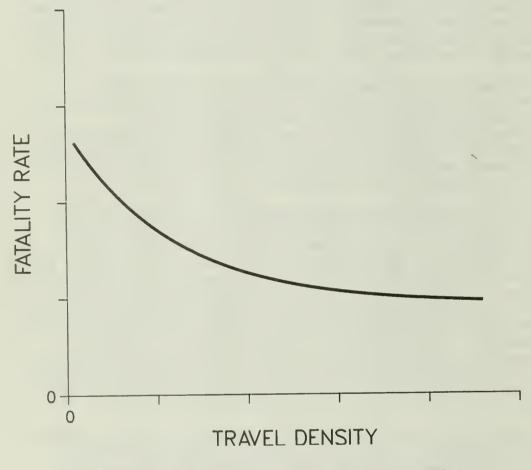


Figure 6. RELATIONSHIP BETWEEN FATALITY RATES AND TRAVEL DENSITY

## SECTION II -- VEHICLE MILEAGE RATES

The most commonly used measures of highway safety are fatality rates based on vehicle mileage. Such rates have been published and widely publicized for over 50 years by the National Safety Council. While other measures are sometimes more appropriate for comparisons and analysis, vehicle mileage rates serve as useful indices. In the tables which follow, rates per 100 million vehicle miles are listed by State and highway system for fatal accidents, nonfatal injury accidents, fatalities, and nonfatally injured persons (Tables 3 through 6, respectively).

The rates shown in these tables are uniformly carried out to two decimal places. This apparent precision surpasses the degree of accuracy of much of the data on which the computed rates are based. Collection and classification of information about miles of highway, vehicle miles of travel, and motor vehicle traffic accidents is a highly complex undertaking. Because of this complexity and the necessity of subjective judgments at many points in the process, the computed rates should be regarded as approximations, not as precise measurements.

## TABLE 3-A. FATAL ACCIDENTS BY STATE AND HIGHWAY SYSTEM - 1988

## FEDERAL-AID INTERSTATE HIGHWAYS

				_	
	AL ENTS	RATE 1/		0.82	
	FATAL ACCIOENTS	NUMBER	E 210 E 21 C 1	2,113	
URBAN	ORILY VEHICLE MILES PER MILE		25. 25. 25. 25. 25. 25. 25. 25. 25. 25.	62.399	
	VEHICLE MILES	f III FF I OND I	3 3 3 2 1 1 2 2 1 3 2 2 1 2 2 2 2 2 2 2	258.662	
	HIGHWAY MILES		22.00.00	11,326	
	STATE		COMPLETE OATA ALROHA ALROHA ARIZONA ARIZONA ARIZONA COLUNECTICUT COLUMECTICUT COLUMENTIC COLUME COLUMENTIC COLUME COLUME COLUME COLUMENTIC COLUME COLU	SUBTOTAL	INCOMPLETE ORTR
	AL ENTS	RRTE 1/	4.0.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1.32	
	FATAL ACCIDENTS	NUMBER	22 2 3 1 1 1 1 2 2 2 3 3 3 4 4 6 6 5 3 4 4 6 6 5 3 4 5 6 5 3 4 5 6 5 6 5 6 5 6 5 6 5 6 5 6 5 6 6 5 6	2.393	
RURAL	OAILY VEHICLE MILES PER MILE		17.222 1.7222 1.	14,873	
	VEHICLE MILES (MILLIONS)		น 407นา	181,284	
	HIGHWAY		2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	33,303	
	STATE		ALABAHA ARIANA A		INCOMPLETE DATA

1/ FATAL ACCIDENTS PER 100 MILLION VEHICLE MILES.

## TABLE 3-B. FATAL ACCIDENTS BY STATE AND HIGHWAY SYSTEM - 1988

## OTHER FEDERAL-AID PRIMARY HIGHWAYS

	AL ENTS	RATE 1/	1.000 1.0000 1.0	1.45	
	FATAL ACCIOENTS	NUMBER	201 449 489 489 489 489 489 489 489	3,959	
URBAN	ORILY VEHICLE MILES PER MILES		2000 10 10 10 10 10 10 10 10 10 10 10 10	22.302	
	VEHICLE	I MILLIUNS J	4 1722 1 1722 1 1723 1 1723	272.160	
	HIGHWAY MILES		8 2442421 1 1 2 2 1 1 2 2 1 1 2 2 2 3 3 8 8 2 4 2 5 2 4 2 4 2 5 2 1 1 1 2 2 1 1 2 2 2 2 3 3 3 8 3 2 2 4 2 4 2 2 2 2 2 2 3 3 3 3 3 3 3 3	33,343	
	STATE		PURBANG PURBANG PURBANG PURBANG PURBANG PURBANG COLUFORNO COLURGO COLURGO COLURGO COLURGO COLURGO PURBANG PURB	SUBTOTAL	INCOMPLETE ORTA
	AL ENTS	RATE 1/	### ### ##############################	2.97	
	FATAI ACCIOEI	NUMBER	2 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	9,166	
RURAL	HIGHNAY WENICLE OBILY MILES WENICLE MILES (MILLIONS) PER MILES		E 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	3,733	
			7 8.30 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	308,438	
			8.8 8.4498. 8.8 9.7 4.80 7.8 8.8 9.8 8.8 9.8 8.8 9.8 9.8 8.8 9.8 9	225,724	
	STATE		ALABAHA  ALASKA ALASKA ARAIZONA ARKANSAS CALIFORNIA COLORADO CONNECTIOUT OELHARRE OIST. OF COL. FLORION ILLINOIS INDIANA INDIANA INDIANA MANASAS KENTUCKY LOUISIANA MANASAS LOUISIANA NORTH ORKOTIA OKLAHUMA OKLAHUMA OKLAHUMA NORTH ORKOTIA IEXAS LEXAS OUTH ORKOTIA VERMONT VIRGINIA MANASAINA MAN	SUBTOTAL	INCOMPLETE OATA

1/ FATAL ACCIDENTS PER 100 MILLION VEHICLE MILES.

17

## TABLE 3-C. FATAL ACCIDENTS BY STATE AND HIGHWAY SYSTEM - 1988

## FEDERAL-AID URBAN HIGHWAYS

	AL ENTS	RATE 1/	1.000000000000000000000000000000000000	
	FATAL ACC10EN	NUMBER	23 23 24 25 26 27 28 28 28 28 28 38 38 38 38 38 38 38 48 48 48 48 48 48 48 48 48 4	
COLLECTOR	OBILY VEHICLE	PER MILE	888494086144747474747474747474747474747474747474	
	VEHICLE	(MILLIONS)	1	
	нісниву	MILES	1.248 1.248 1.248 1.300 2.300 2.300 2.300 1.422 1.422 1.422 1.422 1.423 1.423 1.423 1.423 1.423 1.423 1.423 1.423 1.423 1.433 1.	
	STATE		COMPLETE OATA ALASKA ALASKA ARATASKA ARATASKA ARATASKA COLORACIO C	
	FATAL CIOENTS	RATE 1/		
	FAI	NUMBER	1 692 1 692 1 692 1 8 1 18 8 1 18 8 1 18 8 1 18 8 1 18 8 1 18 8 1 18 8 1 18 8 1 18 8 1 18 8 1 18 8 1 18 8 1 18 8 1 18 8 1 18 8 1 18 8 1 18 8 18 1	
ARTER1AL	ORILY VEHICLE		1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	VEHICLE MILES
	VEHICLE	I MILLIUNS )	4 11.25.25.25.25.25.25.25.25.25.25.25.25.25.	T I I
	HIGHWAY	MILES	. 5 5 15 651 1 6.41 8.2 6.2	ACCIDENTS PER 100
	STATE		COMPLETE ORTH ARTHORYS SCALL FORM SAS CALL SAS CA	FATRI

## TABLE 3-D. FATAL ACCIDENTS BY STATE AND HIGHWAY SYSTEM - 1988

## FEDERAL-AID SECONDARY HIGHWAYS

		COLLECTOR, RURAL				
STATE	HIGHWAY MILES	VEHICLE MILES (MILLIONS)	DAILY VEHICLE MILES	FAT ACCID		
	1111111	(MILLIONS)	PER MILE	NUMBER	RATE 1/	
COMPLETE DATA ALABAMA ALASKA ARIZONA ARKANSAS CALIFORNIA COLORADO CONNECTICUT DELAWARE DIST. OF COL.	11.484 1.951 3.294 7.249 11.064 3.411 902 602	4.305 481 2.522 1.989 9.788 1.430 1.439 625	1.024 674 2.092 750 2.417 1.145 4.359 2.837	156 12 89 65 441 46 36 24	3.62 2.49 3.53 3.27 4.51 3.22 2.50 3.84	
FLORIDA GEORGIA HAWAII IDAHO ILLINOIS INDIANA IOWA KANSAS KENTUCKY LOUISIANA MAINE MARYLAND MASSACHUSETTS MICHIGAN MINNESOTA MINNESOTA MISSISSIPPI MISSOURI MONTANA NEBRASKA NEVADA NEW HAMPSHIRE NEW JERSEY NEW MEXICO NEW YORK NORTH CAROLINA NORTH DAKOTA OHIO OKLAHOMA OREGON PENNSYLVANIA RHODE ISLAND SOUTH CAROLINA SOUTH DAKOTA TENNESSEE TEXAS UTAH VERMONT VIRGINIA WASHINGTON WEST VIRGINIA WISCONSIN WYOMING SUBTOTAL	4.391 14.008 455 4.194 12.957 9.593 13.506 22.605 7.320 7.353 2.742 1.907 2.007 17.106 16.619 11.718 18.062 4.732 11.449 2.315 1.235 1.723 3.936 6.308 10.297 10.577 11.649 11.663 7.811 7.978 203 8.519 11.478 5.448 32.600 2.644 1.946 10.203 7.270 6.370 12.960 2.267 400.081	2.728 5.723 445 1.143 3.398 10.308 2.370 2.637 4.876 4.876 1.732 2.136 1.657 9.797 3.602 3.417 4.981 5.232 10.170 8.376 3.878 2.594 5.773 162 4.419 914 3.027 13.907 13.907 13.907 13.907 13.905 4.176 1.083 3.095 4.176 1.75.429	1.697 1.116 2.672 745 717 2.936 479 319 1.821 1.726 3.060 2.256 1.565 592 797 753 465 2.955 851 2.626 4.656 2.2699 1.965 907 1.977 2.180 1.417 2.181 1.518 1.521 1.522 1.522 1.523 1.523 1.523 1.524 1.524 1.524 1.524 1.524 1.526 1.526 1.526 1.526 1.526 1.521 1.521 1.521 1.521 1.521 1.522 1	159 259 18 47 178 150 103 70 216 244 49 72 32 235 103 133 255 18 30 46 24 75 51 148 369 209 100 91 117 28 151 517 14 30 201 122 148 139 15 6,029	5.83 4.04 4.11 5.246 4.35 1.446 4.35 2.65 4.430 2.89 2.486 3.37 1.93 2.486 3.37 2.486 3.37 2.486 3.37 2.486 3.37 2.486 3.37 2.486 3.37 3.55 3.63 3.55 3.63 3.79 3.79 3.79 3.79 3.79 3.79 3.79 3.7	
	NTS PER 100 MII	LION VEHICLE N	1ILES.			

TABLE 3-E. FATAL ACCIDENTS BY STATE AND HIGHWAY SYSTEM - 1988

## NONFEDERAL-AID ARTERIAL HIGHWAYS

				_
	AL ENTS	RATE 1/	00000000000000000000000000000000000000	
	HIGHMAY WEHICLE ORILY RCCIOENTS WILES (MILLIONS) PER HILE NUMBER RAT		25. 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
URBAN			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
			2 2 2 4 4 6 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	
			2 2 4 2 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4	
	STATE		COMPLETE ORTH ALRSKA ARRIZONA ARRIZONA ARRIZONA COLUCROSTI COLUCROSTI COLUCROSTI COLUSIANO COLUS	
	FATAL ACCIOENTS	RATE 1/	10.00 11.11 10.00 10	
	FA	NUMBER	20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
RURAL	VEHICLE	PER MILE	10.929 10.929 13.279 12.8422 24.5902 24.5902 26.831 27.546 27.139 17.545 17.	
	HIGHMAY MILES (MILLIONS)		1 18 18 18 18 18 18 18 18 18 18 18 18 18	
			257 257 257 257 257 257 257 257 257 257	
	STATE		ACOMPLETE ORTH ACOMPLETE A	

1/ FRITAL ACCIDENTS PER 100 MILLION VEHICLE MILES.

## 20

## TABLE 3-F. FATAL ACCIDENTS BY STATE AND HIGHWAY SYSTEM - 1988

## NONFEDERAL-AID COLLECTOR HIGHWAYS

	AL ENTS	RATE 1/	188918788888888888888888888888888888888	
	FATAL ACCIOENTS	NUMBER	20000000000000000000000000000000000000	
URBAN	VEHICLE	PER MILE	1.698 1.1698 1.1698 1.1698 1.1698 1.1698 1.1698 1.3014 1.3014 1.3014 1.3014 1.3014 1.3014 1.3014 1.3014 1.3014 1.3018	
	VEHICLE MILES	( MILL I UNS )	289 289 1.38 1.38 1.39 1.105 1.105 1.105 1.105 1.105 2.48 2.24 1.105 2.48 2.24 1.105 2.48 2.24 1.105 2.48	
	HIGHWAY	MILES	2 468 2 682 2 682 2 682 2 119 2 119 2 119 2 119 2 119 2 119 2 119 3 139 3 139 3 139 3 149 4 120 1 1 1 203 1 1 1 203 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
:	STATE		COMPLETE ONTH ALABANA AREANSAS CALLTON IO CONNECT ICUT CELMARE ON STANDARD IN THE CONNECT ICUT CELMARE OF CONCION OF CONNECT ICUT CELMARE OF CONCION OF CO	
	FATAL ACCIOENTS	RATE 1/		
	F. ACCI	NUMBER	200 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
RURAL	OBILY VEHICLE	PER MILE	2. 044 1. 073 1. 073	VEHICLE MILES
	VEHICLE MILES MILES (MILLIONS)		1.188 1.198	
	HIGHWAY		6.996 6.996 1.1.723 1.1.723 1.1.94	FATAL ACCIOENTS PER 100 MILLION
	STATE		COMPLETE DATA ALBRAH ARLSONA ARLSONA ARRENSAS CALIFORNIA COUNROO CONNECTICUT CONNECTICUT OELHARE OELHARE OELHARE OELHARE OELHARE OENGIA HARAII ILLINOIS INCINCA INCINCA ILLINOIS INCOMPLETE OATA	1/ FATAL ACCIC

## TABLE 3-6. FATAL ACCIDENTS BY STATE AND HIGHWAY SYSTEM - 1988

## NONFEDERAL-AID LOCAL HIGHWAYS

	AL ENTS	RATE 1/		1.73	
	FATAL ACC10ENTS	NUMBER	2 2 11 11 11 11 11 11 11 11 11 11 11 11	3.157	
URBAN	VEHICLE MILES PER MILE		986 1.2521 1.2522 1	962	
	VEHICLE MILES (MILLIONS)		25	182,085	
НІСНИВУ		IIILES	12.258 47.086 47.086 47.086 47.086 47.086 5.349 10.359	\$17.140	
	STATE		COMPLETE ORTH  RLRSRH RLRSRH RLRSRH RRSRH RRSRH RRSRH COLLORD COLORDO	SUBTOTAL INCOMPLETE DATA	
	al. ENTS	RATE 1/	88888888888888888888888888888888888888	4.73	
	FRTRL RCC10ENTS	NUMBER	251 252 253 253 253 253 253 253 253 253 253	4,433	
RURAL	VEHICLE	PER MILE	200   100	120	
	HIGHWAY MILES MILES (MILLIONS)		E 0-E	93.745	
			24	2.139.793	
			PERSONAL STANDARD MERSONAL MER	SUBTOTAL INCOMPLETE ORTR	

1/ FATAL ACCIDENTS PER 100 MILLION VEHICLE MILES.

22

# TABLE 4-A. NONFATAL INJURY ACCIDENTS BY STATE AND HIGHWAY SYSTEM - 1988

## FEDERAL-AID INTERSTATE HIGHWAYS

			E-120E780-1680RERV5750E6-887-0-188888788-1648848860874781	0
URBAN	NONFATAL INJURY ACCIDENTS	RATE 1/		45.4
		NUMBER	1 1 9 2 6 6 7 1 1 2 6 1 4 1 E E F F S S S S S S	114.372
	ORILY VEHICLE	PER MILE		62,827
	VEHICLE MILES (MILLIONS)		881.00004	251,425
	HIGHWAY MILES			10.934
STATE			COMPLETE OATA ALASKA ARABABA ARASKA ARASKA ARASKA ARASKA ARASKA ARASKA COLORADO CONNECTICUT OCCURETICUT OCCURETICUT OCCURETICUT OCCURETICUT OCCURETICUT OCCURETICUT OCCURETICUT OCCURETICUT OCCURETICUT ON OTHER OCCURETICUT ON OCCURETICUT ON OCCURETICUT OCCURET	SUBTOTAL INCOMPLETE OATA SOUTH CAROLINA TENNESSEE
	INJURY	RATE 1/	<b>8-8668861108974946979989897709848</b> 81909 <b>4</b> 48647798688877	26.22
	NONFATAL INJURY ACCIDENTS	NUMBER		44,532
RURHL	ORILY VEHICLE	PER MILE	1/000/00   1	14.573
	VEHICLE MILES (MILLIONS)		853445686 - 652 - 652 - 653 -	169,840
	HIGHWAY		200:11 200:14	31,843
STATE			PARTETE ONTH A PARTED ON THE ONTH A PARTED ON THE O	SUBTOTAL INCOMPLETE OATA SOUTH CAROLINA TENNESSEE

1/ NONFATAL INJURY ACCIDENTS PER 100 MILLION VEHICLE MILES.

TABLE 4-B. NONFATAL INJURY ACCIDENTS BY STATE AND HIGHWAY SYSTEM - 1988

## OTHER FEDERAL-AID PRIMARY HIGHWAYS

	INJURY	RATE 1/	57.07 98.31 182.62 123.38 123.38 123.38 123.38 123.38 123.38 123.38 123.38 123.38 123.38 123.38 130.03	109.25
	NONFATAL INJURY ACCIDENTS	NUMBER	2	286.164
URBAN	ORILY VEHICLE HILES PER MILE		15. 7037 12. 7037 12. 7037 12. 7037 12. 7038 12. 7048 12. 7048 13. 1048 13. 1048 14. 1048 15. 1048 16.	22,559
	VEHICLE HILES (MILLIONS)		39.05.01 1.72.0 1.72	261.935
	HIGHWAY		8.8 8.8 1.5556 1.5519 1.55	31.724
STATE			COMPLETE DATA ALTANA ARTZONA ARTZONA ARTZONA ARTZONA ARTZONA COLORADO ILLINOIS INDIANA ILLINOIS INDIANA ILLINOIS INDIANA ILLINOIS INDIANA INTERIORA INTERIO	SUBTOTAL INCOMPLETE ORTA SOUTH CAROLINA
	L INJURY DENTS	RATE 1/	51 10 10 10 10 10 10 10 10 10 10 10 10 10	71.88
	NONFATAL INJUR ACCIDENTS	NUMBER	2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	209.845
RURAL	OAILY VEHICLE	PER MILE	20100000000000000000000000000000000000	3,700
	VEHICLE HILES (HILLIONS)		a a a a a a a a a a a a a a a a a a a	291,958
	HIGHWAY		8 6 6 4 6 6 6 6 7 7 7 4 8 6 6 6 6 7 7 7 4 7 7 7 7 7 7 7 7 7 7 7 7	215,567
	D H H H H		COMPLETE CATA RARIZONA RARIZONA RARIZONA RARIZONA COLORADO COLORAD	SUBTOTAL INCOMPLETE ORTA SOUTH CAROLINA

1/ NONFATAL INJURY ACCIDENTS PER 100 MILLION VEHICLE MILES.

24

# TABLE 4-C. NONFATAL INJURY ACCIDENTS BY STATE AND HIGHWAY SYSTEM - 1988

## FEDERAL-AID URBAN HIGHWAYS

	IL INJURY OENTS	RATE 1/	24.778 1.55.01 1.55	
COLLECTOR	NONFATAL ACC 10E	NUMBER	3,120 6,955 6,955 6,955 6,955 1,202 1,202 1,203 1,	
	OAILY VEHICLE	PER MILE	6844261-89668-9968-9968-9968-9968-9968-9968-9	
	VEHICLE MILES (MILLIONS)		1 1 224 1 1 224 1 1 221 2 230 2 230 3 235 2 203 3 235 2 203 3 235 2 203 3 235 2 203 3 235 2 203 3 235 2 203 3 203	
	HIGHWRY MILES		1. 25 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	STATE		COPPLETE ORTR ALRACH RICAGN RICAGN COLORGO COL	TENNESSEE
	INJURY	RATE 1/	2094 1794 1794 1794 1794 1794 1795	
	NONFATAL INJUR ACCIDENTS	NUMBER	3 912 21 057 105 968 105 96	
ARTERIAL	OBILY VEHICLE MILES PER MILE		13.00	
	VEHICLE MILES (MILLIONS)		4 11 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
	HIGHWAY MILES		1.533 1.	
	STATE		COMPLETE DATA  RLABBAHA  RLASCA  RACASSA  COLORROO  CONCEDITOUT  OCLORROO  CONCEDITOUT  OCLORROO  OST, OF COL.  FLORIOS  INDIANA	TENNESSEE

1/ NONFATAL INJURY ACCIDENTS PER 100 MILLION VEHICLE MILES.

## TABLE 4-D. NONFATAL INJURY ACCIDENTS BY STATE AND HIGHWAY SYSTEM - 1988

## FEDERAL-AID SECONDARY HIGHWAYS

	COLLECTOR, RURAL					
STATE	HIGHWAY MILES	VEHICLE MILES (MILLIONS)	OAILY VEHICLE MILES	NONFATAL INJURY ACCIDENTS		
			PERMILE	NUM8ER	RATE 1/	
COMPLETE OATA ALABAMA ALASKA ARIZONA ARKANSAS CALIFORNIA COLORAOO CONNECTICUT OELAWARE OIST. OF COL.	11.484 1.951 3.294 7.249 11.064 3.411 902 602	4.305 481 2.522 1.989 9.788 1.430 1.439 625	1.024 674 2.092 750 2.417 1.145 4.359 2.837	1,571 291 1,319 795 21,742 835 1,245 503	36.49 60.50 52.30 39.9 222.13 58.30 86.53	
FLORIOA GEORGIA HAWAII IOAHO ILLINOIS INOIANA IOWA KANSAS KENTUCKY LOUISIANA MAINE MARYLANO MASSACHUSETTS MICHIGAN MINNESOTA MISSISSIPPI MISSOURI MONTANA NEBRASKA NEVAOA NEW HAMPSHIRE NEW JERSEY NEW MEXICO NEW YORK NORTH CAROLINA NORTH OAKOTA OHIO OKLAHOMA OREGON PENNSYLVANIA RHOOE ISLAND SOUTH DAKOTA TEXAS UTAH VERMONT VIRGINIA WASHINGTON WEST VIRGINIA WISCONSIN WYOMING SUBTOTAL	4,391 14,008 455 4,194 12,957 9,593 13,506 22,605 7,320 7,353 2,742 1,907 2,007 17,106 16,619 11,718 18,062 4,732 11,449 2,315 1,235 1,723 3,936 6,308 10,297 10,577 11,649 11,663 7,811 7,978 203 11,478 32,600 2,644 1,946 10,203 7,270 6,370 12,960 2,267 386,114	2.728 5.723 445 1.143 3.398 10.308 2.370 2.637 4.878 4.876 1.732 2.136 1.657 9.797 3.602 3.417 4.981 805 1.235 721 1.187 2.936 1.161 5.232 10.170 8.376 3.878 2.594 5.773 162 914 13.907 754 1.083 5.918 4.313 3.095 4.176 4.26 167.983	1.697 1.116 2.672 745 717 2.936 479 319 1.821 1.726 3.060 2.256 1.565 592 797 753 465 2.956 851 2.626 4.656 806 2.669 1.965 908 907 1.977 2.180 218 1.166 779 1.521 1.585 1.521 1.528 880 513	3.080 4.573 543 793 3.928 5.354 1.695 1.999 5.410 4.958 1.570 2.626 1.249 6000 2.369 1.392 4.918 367 968 504 813 4.338 4.338 4.338 14.230 9.445 226 10.171 1.410 1.735 6.627 122 436 8.994 4.97 1.041 5.570 10.131 5.435 4.227 163.847	112.90 79.9 122.00 69.31 115.60 51.95 71.55 75.8 110.9 101.66 122.9 75.31 65.7 40.7 45.53 78.31 669.91 92.8 29.7 121.4 36.31 66.8 1147.7 82.00 271.90 92.8 129.7 121.4 36.31 66.89 1147.7 64.6 65.9 94.1 234.86 175.6 101.7 53.29	
SOUTH CAROLINA TENNESSEE						

TABLE 4-E. NONFATAL INJURY ACCIDENTS BY STATE AND HIGHWAY SYSTEM - 1988

## NONFEDERAL-AID ARTERIAL HIGHWAYS

	INJURY	RATE 1/	150.73	71.31	114.16	117.07	283.58	7 - 10	318.60	319	33.64	61.22	41.67 67.20	00.00	257.45	0.00	16.67 32.08	0.00	54.17	91.38	00.0	18.37	9.56		0.00	79.85		
	NONFATAL INJURY ACCIOENTS	NUMBER	517		5,176	240	190 259	2 2	137	1,782	326	30.	334		121	0	638 638	98 0	186	53 85	0	1.129	, 81		133	20,124		
URBAN	OB1LY VEHICLE	PER MILE	4.184	3.273	9.724	16,474	20.747	704.7	3,455	4.250	9.322	14.876	16.393	4.489	4.013	14.098	20.742	12,563	2,732	949	4.684	8.844	18.514	0/1	5.211	8.601		
	VEHICLE	I MILLIUNS I	343	122	4.534	205	2.931	2 -	176	558	696	. 4 . 0	497	. 23	1.354	129	1,989	515	1.811	58	- 24	6.147	847	10 -	206 I	25,202		
	HIGHWAY MILES		224	33 404	1,274	3 A	386	: ::	3 8 C	207	284	m	489	41.	32	- 25	262	112	888	167	- 14	1,899	125	0	108	900.8		
	STATE		COMPLETE ORTH ALABAMA	AR IZONA ARKANSAS	CAL IFORNIA COLORADO	CONNECTICUT OELAWARE	01ST. 0F COI FLORIOR	HAWA11	ILLINOIS INCIBNE	10MA KANSAS	KENTUCKY LOUISIANA	MARYLAND	MASSACHUSETTS MICHIGAN	MINNESOTA MISSISSIPPI	MONTANA	NEVROR	NEW HAMPSHIRE NEW JERSEY	NEW YORK	NOKIH CHKOLINH NORTH OAKOTA	OKLAHOMA	PENNSYLVANIA RHOOE ISLAND	TEXAS UTAH	VERMONT	WEST VIRGINIA	WISCONSIN WYOMING	SUBTOTAL	INCOMPLETE DATA SOUTH CAROLINA SOUTH OAKOTA TENNESSEE	
	INJURY	RATE 1/	00.0	0.00	72.22	82.61	886.72	00.0		1 1	00.00	20.00	1 1	8.42	0.00	1 1	3.40	1 1 6	00.00	12.64	00.0	00.0	00.0	1 1	57.94	346.80		
	NONFATAL INJURY ACCIDENTS	NUMBER	0	0 66	13 0	0	11,421	0		1 1	· ·		1 1	о 1	0	1 1	654	1 1	0	4 4 86	0	0-	0		62	12.478		LE MILES.
RURAL	OBILY VEHICLE	PER MILE	10,929	3.279	2.893	6.982 24.590	9.830	6,831		1 1	. 546	5.464		972	546		21.139		1.371	4.245	911	12.750	1,965	1 1	1.821	3.917		MILLION VEHICLE
	VEHICLE	IMILLIUNSI	4	188	18	23	1,288	25		1 1	1		1 1	1 95	10	1 1	147	1 1	129 I	348	1	28	223	1 1	107	3,598		PER 100
	H1GHWAY M1LES		- 1	363	17	o -	358	10	1 1 1	1 1	10	- '	1 1	267	05	1 1	121	, ,	257	224	n	34	310		253	2,510		INJURY ACCIDENTS
	STATE		COMPLETE ORTA ALABAMA	AR1ZONA ARKANSAS	COL ORADO	CONNECTICUT OEL AWARE	OIST. OF COL. FLORIOA	HAMAII	ILLIN015 1N016NB	10WA KANSAS	KENTUCKY	MARYLAND	MASSACHUSETTS M1CHIGAN	MISSISSIPPI	MONTANA	NEWRHSKH	NEW JERSEY	NEW MEXICO NEW YORK	NORTH CHROLINH NORTH ORKOTA	OKLAHOMA OREGON	PENNSYLVANIA RHOOE ISLANO	TEXAS UTAH	VIRGINIA	WEST VIRGINIA	WYOMING	SUBTOTAL	SOUTH CAROLINA SOUTH CAROLINA SOUTH ORKOTA TENNESSEE	1/ NONFATAL IN

# TABLE 4-F. NONFATAL INJURY ACCIDENTS BY STATE AND HIGHWAY SYSTEM - 1988

## NONFEDERAL-AID COLLECTOR HIGHWAYS

-				
	INJURY	RATE 1/	339 339 339 339 339 339 339 339 339 339	
	NONFATAL INJURY ACCIDENTS	NUMBER	1.154 1.154 1.023 1.	
URBAN	OBJLY VEHICLE	PER MILE	2. 698 2. 698 2. 698 2. 698 2. 698 2. 698 2. 698 3. 698	
	VEHICLE MILES (MILLIONS)		289 4,996 628 1388 1388 106 106 106 1106	
	HIGHWAY		2 5 6 8 2 3 3 2 4 4 5 2 6 8 3 2 4 4 5 2 6 8 3 2 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	
_	STATE		COMPLETE ORTH REALESTS RELEGAR RELEGAR RELEGAR RELEGAR RELEGAR RELEGAR RELEGAR RELEGAR RELEGAR COLORGO CONNECTICUT OCLEMBRE OLISTOP FLORIO COLORGO CONNECTICUT OCLEMBRE OLISTOP FLORIO ILLINOIS INOI RAP ILLINOI INOI RESOLU INOI INOI RESOLU ILLINOI INOI INOI INOI INOI INOI INOI I	
	NONF BIRL INJURY ACCIDENTS	RATE 1/	142 77 19 19 19 19 19 19 19 19 19 19 19 19 19	
	NONFATA	NUMBER	491 491 144 152 1356 1356 1356 1356 1356 1356 1356 1367 1376	
KUKHL	VEHICLE	PER MILE	2 2041 1 0125 1 0125	
	VEHICLE MILES	I L L L L L L L L L L L L L L L L L L L	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	HIGHNAY		6 9 9 6 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	
	STATE		COMPLETE ONTRA RANGERS RANGERS RANGERS CRITCONS COLORADO CONNECTIOUT OCLAMARE OLDS CRITCONS C	

# TABLE 4-G. NONFATAL INJURY ACCIDENTS BY STATE AND HIGHWAY SYSTEM - 1988

### NONFEDERAL-AID LOCAL HIGHWAYS

		1	00000000000000000000000000000000000000	.04	
	INJURY	RATE 1	2	239.	
	NONFATAL INJURY ACCIDENTS	NUMBER	6 412 6 412 18.7526 18.7526 19.712	426.145	
URBAN	ORILY	PER MILE	1 1 1111E 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	974	
	VEHICLE	(MILLIUNS)	4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 +	178.275	
	HIGHWAY M1LES		25. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	499,934	
	STATE	•	COMPLETE OATA ALEASHA ALEASHA ARIZONA ARKANSAS COLORNECTICUT COLORNECTIC	SUBTOTAL	INCOMPLETE ORTR SOUTH CAROLINA TENNESSEE
	INJURY	RATE 1/	103.252 103.253 103.123 103.123 103.123 103.123 104.255 105.133 105	198.51	
	NONFATAL INJURY ACCIDENTS	NUMBER	2 2 1 2 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2	178.875	
RURAL	OBILY VEHICLE	PER MILE	22	120	
	VEHICLE MILES	(MILLIUNS)	2 2 2 3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	90,109	
			84 74474 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	2,057,223	
	STATE		COMPLETE OATA ALRAHA ARTRONA ARKANSAS CALLFORNO CONNECTCUT OCLAHARE OTST. OF COL. FLORTO COLORADO CONNECTCUT OCLAHARE OTST. OF COL. FLORTO FLORTO INGRA INGR	SUBTOTAL	INCOMPLETE DATA SOUTH CAROLINA TENNESSEE

## TABLE 5-A. FATALITIES BY STATE AND HIGHWAY SYSTEM - 1988

### FEDERAL-AID INTERSTATE HIGHWAYS

	17165	RATE 1		0.89	
	FATALITIE	NUMBER	28 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	2,301	
URBAN	ORILY VEHICLE	MILES PER MILE	20.20 20	62 - 399	
	VEHICLE	(MILLIONS)	3 : 3 : 3 : 3 : 3 : 3 : 3 : 3 : 3 : 3 :	258.662	
	нісниву	MILES		11.326	
	STATE		COMPLETE ORTH REABRAGE REAGRAGE REAGRAGE COLORADO COUNECTICUT OCLORADO ILLINOIS INDIANA	SUBTOTAL INCOMPLETE OATA	
	11165	RATE 1/	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1.56	
	FATRL	NUMBER	000400 00 00 00 00 00 00 00 00 00 00 00	2.826	
RURAL	ORILY	MILES PER MILE	• • • • • • • • • • • • • • • • • • • •	14.873	HILES.
	VEHICLE	(MILLIONS)	0044000 00 000-000000000000000000000000	181 • 284	JON VEHICLE
	нісниву	MILES	00000000000000000000000000000000000000	33,303	PER 100 MILL10N
	STATE		COMPLETE DATA  PLESKA  PRIZONA  PREMISS  CRITFORNI  COLORED  COLOR	SUBTOTAL INCOMPLETE ORTA	1/ FATALITIES

## TABLE 5-B. FATALITIES BY STATE AND HIGHWAY SYSTEM - 1988

## OTHER FEDERAL-AID PRIMARY HIGHWAYS

	ATALITIES	RATE 1/	1 1111111111111111111111111111111111111	
		NUMBER	116 116 116 116 1179 1179 1179 1179 1179	
URBAN	OB1LY VEHICLE	MILES PER MILE	15. 10. 10. 10. 10. 10. 10. 10. 10. 10. 10	
	VEHICLE	(MILLIONS)	7.72 3.2.071 1.178 3.3.6651 1.178	
	HIGHWAY	MILES	888 878 1.5876 1.5876 1.5876 1.5876 1.5128 1.51	
	STATE		CONFLETE ORTR  REASKRA  REASKRA  REASKRA  REASKRA  REASKRA  REASKRA  CCLUISONIA  ICHOO  ICHOONIO	
	ATALITIES	RATE 1/	444000 100040000000000000000000000000	
	FATAL	NUMBER	2 88 8 8 9 1 9 1 9 1 9 1 9 1 9 1 9 1 9 1	
RURAL	OBILY VEHICLE	MILES PER MILE		MILES.
	VEHICLE	MILLIUNS	7 694 68 68 68 68 68 68 68 68 68 68 68 68 68	100 MILLION VEHICLE
	нІсныях	MILES	22 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	PER 100 MILL
	STATE		COMPLETE ORTH RLABARA ARLASARA ARLASARA ARRANSAS CALIFORNIA COLONECTICUT COLNECTICUT COLNE	1/ FATALITIES

## TABLE 5-C. FATALITIES BY STATE AND HIGHWAY SYSTEM - 1988

### FEDERAL-AID URBAN HIGHWAYS

	ALITIES	RATE 1/	100-100-100-100-100-100-100-100-100-100
	FATAL	NUMBER	23 8 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
COLLECTOR	OR ILY VEHICLE	PER MILE	6.044.02.00.00.00.00.00.00.00.00.00.00.00.00.
	VEHICLE MILES	(MILLIUNS)	1.52 1.13 1.13
	нісныях	MILES	1.248 1.248 1.259 1.300
	STATE		COMPLETE ORTH ALL RRANG ALL RANG ARKANSAS CALL TONN COLONECT ICUT COLONE
	11165	RATE 1/	
	FATAL	NUMBER	2557 1, 8133 100 101 101 101 101 101 101
ARTERIAL	ORILY VEHICLE		13.39393 10.3939 10.39393 10.3939
	VEHICLE MILES	(MILLIONS)	1.533 2.202 2.202 2.202 1.737 12.607 1.737 1.235 1.235 1.235 1.235 1.235 1.235 1.235 1.235 1.439 1.442 1.325 1.339 1.344 1.325 1.344 1.347 1.349 1.344 1.347 1.349 1.347 1.347 1.349 1.347 1.348 1.349 1.347 1.349 1.349 1.347 1.349
	нісниях	MILES	1
	STATE		COMPLETE ORTH ALRANSAS CALLEGRIA RRIZONA RRIZONA RRIZONA RRIZONA COLLEGRIA C

### TABLE 5-D. FATALITIES BY STATE AND HIGHWAY SYSTEM - 1988

### FEDERAL-AID SECONDARY HIGHWAYS

COMPLETE DATA			CO	LLECTOR, RUR	AL	
COMPLETE DATH RLABAMA RLABAMA RLABAMA RLABAMA RLABAMA RLABAMA RRIZONA	STATE		MILES	VEHICLE	FATAL	.ITIES
RLABAMA		HILLES	(HILLIONS)		NUMBER	RATE 1/
GEORGIA	ALA8AMA ALASKA ARIZONA ARKANSAS CALIFORNIA COLORADO CONNECTICUT DELAWARE DIST. OF COL.	1,951 3,294 7,249 11,064 3,411 902 602	481 2.522 1.989 9.788 1.430 1.439 625	674 2.092 750 2.417 1.145 4.359 2.837	14 104 75 519 50 40 26	2.91 4.12 3.77 5.30 3.50 2.78 4.16
	FLORIDA GEORGIA HAWAII IDAHO ILLINOIS INDIANA IOWA KANSAS KENTUCKY LOUISIANA MAINE MARYLAND MASSACHUSETTS MICHIGAN MINNESDTA MISSISSIPPI MISSOURI MONTANA NEBRASKA NEVADA NEW HAMPSHIRE NEW JERSEY NEW MEXICO NEW YORK NORTH CAROLINA NORTH DAKOTA OHIO OKLAHOMA OREGON PENNSYLVANIA RHODE ISLAND SOUTH CAROLINA SOUTH CAROLINA SOUTH CAROLINA SOUTH CAROLINA SOUTH CAROLINA VERMONT VIRGINIA VERMONT VIRGINIA WASHINGTON WEST VIRGINIA WISCONSIN WYOMING	14.008 4.194 12.9593 13.5065 7.353 22.605 7.353 2.7907 17.106 16.619 11.718 18.0632 11.449 2.315 1.723 3.9308 10.577 11.6661 11.6661 7.811 7.811 7.817 8.519 11.478 32.6644 10.203 7.270 6.370 12.967	5.723 445 1.143 3.398 10.308 2.370 2.637 4.878 4.876 1.657 9.797 3.602 3.417 4.981 805 1.235 721 1.187 2.936 1.161 5.232 10.170 8.376 3.878 2.594 5.773 13.907 754 1.083 5.918 4.313 3.095 4.176 426	1.116 2.672 7477 2.936 479 319 1.821 1.812 1.726 3.060 2.256 1.565 2.95 851 2.626 4.655 2.626 4.656 2.699 1.965 908 907 1.965 908 907 1.1666 1.565 1.565 1.565 2.566 2.699 1.965 1.965 1.965 1.977 2.180 1.417 2.18 1.518 1.518 1.518 1.521 1.585 1.58	287 18 549 192 114 247 278 578 335 125 1290 32 125 1290 32 100 1216 18 30 1654 214 137 1652 18	5.014 .014
INCOMPLETE DATA		400,081	175,429	1,198	6,771	3.86
1/ FATALITIES PER 100 MILLION VEHICLE MILES.						

## TABLE 5-E. FATALITIES BY STATE AND HIGHWAY SYSTEM - 1988

## NONFEDERAL-AID ARTERIAL HIGHWAYS

	· · · · · ·	_	
	ITIES	RATE 1/	1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	FATAL	NUMBER	00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
URBAN	OBILY VEHICLE	PER MILE	10.1184 10.
	VEHICLE MILES	LITE LIUNG	343 4,884 4,834 4,834 1,25 1,18 1,18 1,354
	HIGHWAY	HILES	224 224 1,274
	STATE		COMPLETE ORTH HERBER ALL STAND AND ALL SEEL ORTH ALL STAND AND AND ALL STAND AND AND ALL STAND AND AND AND AND AND AND AND AND AND
	ITIES	RATE 1/	10.00 10
	FATAL	NUMBER	29
RURAL	OBJLY VEHICLE	PER MILE	10.929 3.279 2.8893 2.8893 2.8893 2.8893 3.279 9.830 9.830 9.830 9.830 1.371 1.371 1.366 1.366 1.366 1.371 1.366 1.366 1.371 1.366 1.371 1.366 1.371 1.366 1.371 1.366 1.371 1.366 1.371 1.366 1.371 1.366 1.371 1.366 1.366 1.371 1.371 1.366 1.371 1.371 1.366 1.371 1.371 1.366 1.371 1.371 1.366 1.371 1.371 1.366 1.371 1.371 1.371 1.366 1.371 1.371 1.366 1.371 1.371 1.366 1.371 1.371 1.371 1.366 1.371 1.371 1.366 1.371 1.371 1.366 1.371 1.371 1.366 1.371 1.371 1.366 1.371 1.371 1.371 1.366 1.371 1.366 1.371 1.371 1.371 1.366 1.371 1.37
	VEHICLE MILES	HILLIUMS	11
	HIGHMAY	HILES	11. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.
	S↑A E		PEREFE DATA  PERSONA  PERSONA  PERSONA  PERSONA  COLONECTICUT  COLONECTI

## TABLE 5-F. FATALITIES BY STATE AND HIGHWAY SYSTEM - 1988

## NONFEDERAL-AID COLLECTOR HIGHWAYS

	ITIES	RATE 1/	-1004-044000000480000000001000400440-0-1201-0-1201-0-1201-0-1	
	FATALITIES	NUMBER	886-195 1138-10000000000000000000000000000000000	
URBAN	OBILY VEHICLE	MILES PER MILE	10.44 10	
	HIGHMAY MILES	(MILLIUNS)	289 4,986 4,986 138 138 138 138 108 108 108 108 108 108 108 10	
		MILES	465 465 465 465 465 465 465 104 104 104 105 105 106 105 105 105 105 105 105 105 105	
	· STATE		COMPLETE ORTRA REAGRA REAGRA REAGRA REAGRA REAGRA REAGRA COLONROCTICUT C	
	FATALITIES	RATE 1/		
	FATR	NUMBER	25 1986 1986 1986 100 100 100 100 100 100 100 10	
RURAL	OBILY VEHICLE	PER MILE	444488	MILES.
	VEHICLE MILES	LTILLIUNS	1. 1. 4. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	MILLION VEHICLE
	HIGHWRY	MILES	6 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	PER 100 MILL
	STATE		COMPLETE ORTA ALRARAH ARTANASA CALLENNIA COLONISTRA GEORGI CONNECTIOUT OELHARRI OELHARRI OELHARRI IOAHO ILLINDIS INDIANA IOAH INSTITUT IOAHO INTERNIA IOAH INTERNIA I	1/ FATALITIES

## 5-G. FATALITIES BY STATE AND HIGHWAY SYSTEM - 1988 TABLE

### NONFEDERAL-AID LOCAL HIGHWAYS

	ALITIES	RATE 1/		
	FATAL	NUMBER	88 13 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
URBAN	OB1LY VEHICLE	PER MILE	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	VEHICLE MILES (MILLIONS)	(MILLIUNS)	4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 +	
	НІСНИВУ	MILES	12.22 14.4.10863 16.6689	
	STATE		COMPLETE DATA ALABAHA ALABAHA ALABAHA ALABAHA ARANSAS COLORGO CONORCT IONA HARASAS KENTUCKY LOUISIANA HARASAS KENTUCKY LOUISIANA HARASAS KENTUCKY LOUISIANA HARASAS KENTUCKY CONORCT MICHIGAN HINESSACHIA MISSISSIPPI MONTH CRACUINA NORTH CAROLINA NOR	
	17168	RATE 1/	6 6 6 7 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8	
	FATAL	NUMBER	2 6 6 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	
RURAL	OBILY VEHICLE	PER MILE	200 100 100 100 100 100 100 100	MILES.
	VEHICLE	I WILLIUNS!	E SIE   SE EIIII   S S S S S S S S S S S S S S S S S	TON VEHICLE
	нІбния	MILES	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	PER 100 MILLION
	STAE		C HPRETE ORTH REPRENENT OF COLORADO OF COL	1/ FRTALITIES

# TABLE 6-A. NONFATALLY INJURED PERSONS BY STATE AND HIGHWAY SYSTEM - 1988

### FEDERAL-AID INTERSTATE HIGHWAYS

	TALLY PERSONS	RATE 1/	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
	NONFATALLY INJUREO PERSONS	NUMBER	2 2 3884 2 2 3885 2 2 3885 2 2 3885 2 3 385 2 3 385 3 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	7664671
URBAN	OBILY VEHICLE	PER MILE	1333 8669 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	770 770
	VEHICLE MILES	(MILLIUNS)	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	674-167
	HIGHWAY	лісер	22	7
	STRTÉ		COMPLETE OHTH HLABRAH HLABRAH HLABRAH HRAKENSAS CALIFORNIA CONDECTICUT CONDECTICUT CONDECTICUT CONDECTICUT CONDECTICUT CONDECTICUT CONDECTICUT CONDECTICUT LINDIS LINDIAN LONGISTANA HORNE HINNESSIPA	SUBJUINE INCOMPLETE OATA SOUTH CAROLINA TENNESSEE
	TALLY	RATE 1/	88884488   LEERRRA442888884-LESSERSERSERSERSERSERSERSERSERSERSERSERSE	76.
	NONF PERSONS	NUMBER	1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	76047/
RURAL	OA1LY VEHICLE	PER MILE	7.7.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2	
	VEHICLE MILES	L L L L L L L L L L L L L L L L L L L	8 6 7 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	
	H1GHWRY	HILES	1,052 1,039 1,419 1,	
	STATE		ALREADING ALREANING ALREANING ALREANING ALREANING COLURATION CONNECTICUT COLURANINE COLU	INCOMPLETE OATA SOUTH CAROLINA TENNESSEE

1/ NONFATALLY INJURED PERSONS PER 100 MILLION VEHICLE MILES.

37

TABLE 6-B. NONFATALLY INJURED PERSONS BY STATE AND HIGHWAY SYSTEM - 1988

## OTHER FEDERAL-AID PRIMARY HIGHWAYS

RLLY	PERSONS	RATE 1/	88.20 1.272.0 1.272	174.43
NONFATALLY	INJUREO	NUMBER	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	456.891
URBAN	VEHICLE	PER MILE	25.27.29.3 26.27.39.3 27.27.39.3 27.27.39.3 27.27.39.3 27.27.39.3 27.27.39.3 27.29.3	22,559
VEHICLE	VEHICLE MILES (MILLIONS)		2 2 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	261.935
	HIGHWAY		1.556 1.556 1.556 1.556 1.556 1.556 1.556 1.568	31,724
STATE			COMPLETE ONTH ALRARMAN ALRARMAN ARRANGAS CRIFTORNIA COLORROO CONNECTICUT CCLORROO CONNECTICUT CCLORROO CONNECTICUT CCLORROO CONNECTICUT CCLORROO CONNECTICUT CCLORROO CONNECTICUT CCLORROO CCNNECTICUT CCLORROO CCNNECTICUT CCLORROO CCNNECTICUT CCLORROO CCNNECTICUT CCCNNECTIC CC	SUBTOTAL INCOMPLETE ORTA SOUTH CAROLINA
TALLY	PERSONS	RATE 1/	81.54 67.63 67	121.61
NONFATBLLY	INJURED	NUMBER	6 580 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	355.061
RURAL	VEHICLE	PER MILE	6 - 1 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2	3.700
VEHICLE	MILES (MILLIONS)		2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	291,958
	HIGHWAY		0 0400	215.567
S == 8			PARTIE OR TRANSPORTED ON THE PROPERTY OF THE P	SUBTOTAL INCOMPLETE ORTA SOUTH CAROLINA

1/ NONFATALLY INJURED PERSONS PER 100 MILLION VEHICLE MILES.

# TABLE 6-C. NONFATALLY INJURED PERSONS BY STATE AND HIGHWAY SYSTEM - 1988

### FEDERAL-AID URBAN HIGHWAYS

	TALLY PERSONS	RATE 1/	292 928 928 928 928 938 938 938 938 938 938 938 93	
	NONFATALLY INJUREO PERSONS	NUMBER	4.458 1.0369 1.0369 1.0369 5.6006 2.343 1.0392 1.0393 2.1078 2.1078 2.1078 2.1078 2.1078 2.1078 1.6191 1.6191 1.6191	
COLLECTOR	VEHICLE	PER MILE	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	
	VEHICLE MILES	( WILLIUNS )	1.522 1.1211 1.1214	
	HIGHWAY		1	
	STATE		COMPLETE ORTR RIABRIA RIABRIA RIABRIA RIABRIA RIABRIA RIABRIA RIABRIA COLL FORNIA COLL FOR	
	NONFATALLY NJUREO PERSONS	RATE 1/	200 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
	NONF F 1 N J UREO	NUMBER	5.585 33.3078 15.5785 1.53.7157 1.53.7157 1.667 1.7566 1.767 1.7	
ARTERIAL	OBILY VEHICLE	۳.	7.33 13.944 18.954 18.954 14.2935 14.2935 14.2935 17.793 17.793 17.793 17.793 17.793 17.793 18.765 19.74	
	VEHICLE MILES	LIILL LUNG I	4.126 11.737 75.7472 75.7472 75.7472 75.7473 75.747	
	HIGHWAY	HILES	12 2 2 10 2 2 10 2 2 2 2 2 2 2 2 2 2 2 2	
	STATE		COMPLETE ONTA ALREAGE ALREAGE ARRIZONA BREAKINSAS CALLIFORNIO CONNECTICUT OCLEMARE OTIST. OF COL. FLONTOR ILLINOIS INDIANA IND	

1/ NONFATRLY INJURED PERSONS PER 100 MILLION VEHICLE MILES.

39

### TABLE 6-D. NONFATALLY INJURED PERSONS BY STATE AND HIGHWAY SYSTEM - 1988

### FEDERAL-AID SECONDARY HIGHWAYS

		COL	LECTOR, RURAL		
STATE	HIGHWAY MILES	VEHICLE MILES (MILLIONS)	DAILY VEHICLE MILES	NONFA INJUREO	TALLY PERSONS
	HILLS		PER MILE	NUM8ER	RATE 1/
COMPLETE DATA ALASKA ARIZONA ARKANSAS CALIFORNIA COLORADO CONNECTICUT OELAWARE OIST. OF COL.	11.484 1.951 3.294 7.249 11.064 3.411 902 602	4.305 481 2.522 1.989 9.788 1.430 1.439 625	1,024 674 2,092 750 2,417 1,145 4,359 2,837	2,453 450 2,301 1,419 34,939 1,254 1,811 832	56.98 93.56 91.24 71.34 356.96 87.69 125.85 133.12
FLORIOA GEORGIA HAWAII IDAHO ILLINOIS INOIANA IOWA KANSAS KENTUCKY LOUISIANA MAINE MARYLANO MASSACHUSETTS MICHIGAN MINNESOTA MISSISIPPI MISSOURI MONTANA NEBRASKA NEVAOA NEW HAMPSHIRE NEW JERSEY NEW MEXICO NEW YORK NORTH CAROLINA NORTH OAKOTA OHIO OKLAHOMA OREGON PENNSYLVANIA RHOOE ISLANO SOUTH OAKOTA TEXAS UTAH VERMONT VIRGINIA WASHINGTON WEST VIRGINIA WISCONSIN WYOMING SUBTOTAL INCOMPLETE OATA SOUTH CAROLINA TENNESSEE	4,391 14,008 4,194 12,957 9,593 13,506 22,605 7,320 7,353 2,742 1,907 17,106 16,619 11,718 18,062 4,732 11,449 2,315 1,723 3,936 6,308 10,297 10,577 11,649 11,663 7,811 7,978 203 11,478 32,600 2,644 1,946 10,203 7,270 6,370 12,960 2,267 386,114	2.728 5.723 445 1.143 3.398 10.308 2.370 2.637 4.878 4.878 4.876 1.732 2.136 1.657 9.797 3.602 3.417 4.981 805 1.235 721 1.187 2.936 1.161 5.232 10.170 760 8.376 3.878 2.594 5.773 162 914 13.907 754 1.083 5.918 4.313 3.095 4.176 426	1.697 1.116 2.672 745 717 2.936 479 319 1.821 1.812 1.726 3.060 2.256 1.565 592 797 753 465 2.956 806 2.669 1.965 806 2.699 1.965 908 907 1.977 2.180 218 1.166 779 1.521 1.585 1.621 1.328 880 513 1.189	5.346 7.312 827 1.268 5.911 8.115 2.477 2.976 8.677 8.721 2.355 4.069 1.684 1.026 3.6467 6.818 1.496 2.5667 6.818 1.496 2.560 2.886 10.203 15.736 16.496 2.260 2.8863 1.593 9.736 15.079 8.408 6.373 359 259.487	195.97 127.77 185.84 110.94 173.96 78.73 104.51 1112.86 177.88 178.86 135.97 190.50 101.63 101.22 75.12 136.88 72.30 121.13 114.84 97.39 216.72 138.76 421.44 154.73 196.94 58.28 111.26 176.72 130.25 107.82
1/ NONFATALLY I	NJURED PERSONS	PER 100 MILLI	ON VEHICLE MIL	ES.	

TABLE 6-E. NONFATALLY INJURED PERSONS BY STATE AND HIGHWAY SYSTEM - 1988

## NONFEDERAL-AID ARTERIAL HIGHWAYS

	Y ONS	RATE 1/	214.87	106.56	184.36	160.98	367.16	00.0	111.86	.427.27	476.34	87.79	716.67	70.83	00.00	129.32	0.00	26.67	276.88	86.75	143.10	/11.761	31.17	271.43	13.34	90.29	00.0	124.93		
	NONFRIBLLY INJUREO PERSONS								_	_															 e o	· · ·				
	INJUNI	NUMBER	73.	130	8,35	33	246	•	133	7.792	2.658	- 56	43	17 S12	1	1.751	1	986	1.50	1.571	833	1	1.916	i i		186		31.486		
URBAN	OBILY VEHICLE	MILES PER MILE	4 . 184	10,101	9.724	16.474	18.258	7.482	6,083	8,587	7,365	9,322	S,464 14,876	16,393	4,489	7.197	14.098	21.570	9.797	5.510	949	04/04	8.84	2.332	18.514	5.211	1,366	8.601		
	VEHICLE	(MILLIONS)	343	122	4.834	202	67	30	118	176	14 SS8	696	49	24	- 23	1.354	-129	1,989	848	1,811	SS	- 92	6,147	သို့	847	206	-	25.202		
	нісниву	MILES	224	33	1.274	34	12	11	83	34 S6	207	284	ოთ	489	- 14	514	- 28	19	152	898	167		1,899	- 41	125 10	108	8	8.006		
	STATE		COMPLETE ORTA	AR I ZONA ORKONSOS	CALIFORNIA	COLUKHUO CONNECTICUT	OIST. OF COL.	GEORGIA	108H0	INDIANA	IOWA	KENTUCKY LOUISIANA	MAINE MARYLANO	MASSACHUSETTS MICHIGAN	MINNESOTA	MISSOURI	NEBRASKA	NEW HAMPSHIRE NFW JERSEY	NEW MEXICO	NORTH CAROLINA NORTH OAKOTA	OHIO	PENNSYLVANIA	RHOOE ISLANO TEXAS	VERMONT	VIRGINIA WASHINGTON	WEST VIRGINIA WISCONSIN	MYOMING	SUBTOTAL	INCOMPLETE ORTR SOUTH CAROLINA SOUTH OAKOTA TENNESSEE	
	TALLY	RATE 1/	00.0	0.00	127.78	91.30	00.0	1.327.40	00.0	1 1		0.00	00.08	1 1	14.74	00.0	1 1	4.08	1 1	62.02	21.55	00.001	 6.6.	60.6	00.0	0.00	92.52	593.97		
	NONFATALLY 1NJUREO PERSONS	NUMBER	0	021	233	210	0 - 01	19,0/4	- '			0		1 1	- 14	, ,	1 1	0 1.071	. 1 1	80	7.5	- 136	00		0 1	0	66	21,371		
RURAL	ORILY VEHICLE	MILES PER MILE	10,929	3.279	2,893	6,982	24,390	0.00.0	168.1		1 1	. 546	5,464	1 1	972	S46	1 1	21,139	)	1,371	4.245	2 199	911	- 884	1,965	1,821	1,156	3.917		
	VEHICLE MILES	(MILLIONS)	4	1 18	180	23 23	D 00	0071	67 -	1 1	1'1	2		r 1	- 86	101	1 1	147	1 1	129	348	136	28	Ξ,	223	7	107	3,598		
	HIGHWRY	MILES	1	15	17	- 6-	J 000	900	= '		1 1	- 10		1 1	267	80	1 1	121	1 1	257	224	169	e 0	34	310	n I	253	2,510		
	STATE		COMPLETE ORTR	PRIZONA PRIZONA OBKONSOS	CALIFORNIA	COLUKHUU CONNECTICUT	OLLHWHKE OIST. OF COL.	GEORGIA	I ORHO	INDIANA	10WA KANSAS	KENTUCKY LOUISIANA	MAINE	MASSACHUSETTS	MINNESOTA	MISSOURI	NEBRASKA	NEW HAMPSHIRE NEW JERSEY	NEW MEXICO	NORTH CAROLINA NORTH DAKOTA	OHIO OKLAHOMA	OKEGUN PENNSYL VAN I A	RHOOE ISLANO TEXAS	VERMONT	VIRGINIA	MEST VIRGINIA MISCONSIN	MYOMING	SUBTOTAL	JNCOMPLETE ORTH SOUTH CAROLINA SOUTH ORKOTA TENNESSEE	7 >

# TABLE 6-F. NONFATALLY INJURED PERSONS BY STATE AND HIGHWAY SYSTEM - 1988

## NONFEDERAL-AID COLLECTOR HIGHWAYS

		_	
	TALL Y PERSONS	RATE 1/	570 570 570 571 571 571 572 573 573 573 573 573 573 573 573
	NONFATALLY 1NJUREO PERSONS	NUMBER	1.649 1.649 1.4578 1.4578 1.4578 1.4578 1.120 1.120 1.120 1.130
URBAN	OBILY VEHICLE	PER MILE	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1
	VEHICLE	I WILLIUMS I	289 289 4.996 629 629 629 629 106 1106 11102 111
	НІСНИВУ	плез	465 533 324 2.682 606 606 606 104 107 108 108 108 108 108 108 108 108
	STRTE		COMPLETE DOTA RABBRA RABBRA RABBRA RABBRA RAILZONA RAILZONA RAILZONA COLLENARE DISTA OF COL COLORGO COLORIO ROBE LALINOIS ILLINOIS ILLINOIS ILLINOIS INDIANA RABBRA
	NONFATALLY NJUREO PERSONS	RATE 1/	15.3 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5
	NONFA	NUMBER	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
RURAL	OBILY VEHICLE	PER MILE	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
	VEHICLE	LUILL IUNS I	1.188 1.198
	HIGHHAY	ПІСЕЗ	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
	STRIE		COMPLETE ONTH A PLEASE A PLANT A PLANT A PLANT A PARTICON A PARTIC

1/ NONFATALLY INJURED PERSONS PER 100 MILLION VEHICLE MILES.

# TABLE 6-G. NONFATALLY INJURED PERSONS BY STATE AND HIGHWAY SYSTEM - 1988

### NONFEDERAL-AID LOCAL HIGHWAYS

TALLY PERSONS	RATE 1/	207.73 8.86.74 8.86.74 8.86.74 8.86.74 8.86.87	360.75	
NONF INJURED	NUMBER	2 186 2 186 2 186 2 186 2 186 2 186 2 186 3 186	618,711	
ORILY VEHICLE	PER MILE	1 1 2552 1 25	962	
VEHICLE MILES	LILL LUND )	4 4 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	171,507	
HIGHWAY	HILES	1.1.2558 1.1.25	486,986	
STATE		COMPLETE ORTH RIABRIA RIABRIA RIABRIA RATZONA RRYGNSAS COLLEGRANG COLORORO CONNECTION COLORORO CONNECTION COLORORO CONNECTION FORMAN FORMAN ILLINOIS INON RAM FORMAN INON RAM FORMAN RANSAS KENTUCKY LOUIS INAM RANTOR RANSAS KENTUCKY LOUIS INAM RANTOR RANTOR RESSACIO REM RESCON REM	SUBTOTAL	INCOMPLETE ORTH NORTH CAROLINA SOUTH CAROLINA TENNESSEE
TALLY	RATE 1/	1000 1000	306,44	
NONF 1NJUREO	NUMBER	1.000 1.0000 1.00000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	263,286	
OAILY VEHICLE	PER MILE	200 1268 1644 1654 1654 1657 1657 1657 1657 1657 1657 1657 1657	117	
VEHICLE MILES	CHIEL LUNG	3.056 3.	85,919	
HIGHWAY	HILES	48.584 47.585 57.655 67.072 67	2,006,299	
STATE		COMPLETE ORTH RIABRIA RIABRIA RATZONA RATZONA RATZONA RATZONA COLUSTON CONUCTION CONUCTION CONUCTION CONUCTION FORMER OIST. OF COL CONUCTION INTERNA I	SUBTOTAL	INCOMPLETE OBTR NORTH CAROLINA SOUTH CAROLINA TENNESSEE
	HIGHMAY VEHICLE ORILY NONFBTALLY STATE HIGHMAY WILES VEHICLE INJUNEO PERSONS HIGHMAY HIGHMAY WILES VEHICLE STATE	HIGHMAY WEHICLE OBILY NONFBTALLY STATE HIGHMAY WHICES WHICLE INJUREO PERSONS HILES WHICLE INJUREO PERSONS HILES WHICLE INJUREO PERSONS HILES WHICE FROM HILES WHICE FOR BATE RATE RATE RATE	HILLER   H	HILES   HILE

./ NONFATALLY INJURED PERSONS PER 100 MILLION VEHICLE MILES.

### SECTION III -- OTHER RATES

### A. Highway Mileage

Vehicle mileage rates for the United States are the most common measure of safety performance (Table 1). For some purposes, rates per mile of highway may be more useful (Table 7). Note that, because of the concentration of travel on highway systems with the fewest fatalities per vehicle mile, highways on these systems tend to have the highest number of fatalities per highway mile.

### B. Population

Population rates are most useful for comparing motor vehicle accidents with other public health problems. In 1988, only heart disease, cancer and stroke were responsible for more deaths, according to the National Center for Health Statistics. State rates per thousand residents are listed in Table 8 for fatal and nonfatal injury accidents, fatalities, and nonfatally injured persons.

### C. Licensed Drivers

The number of accidents per licensed driver reflects both the care with which drivers operate their vehicles and the amount of travel under various conditions. States' accident, fatality, and injury rates per licensed driver are listed in Table 9.

### D. Registered Vehicles

As is the case with licensed drivers, the number of accidents per registered vehicle is affected both by the care with which the vehicle is driven and the amount of travel under various conditions. States' rates per registered vehicle are listed in Table 10.

## TABLE 7. U.S. HIGHWAY-MILE RATES BY HIGHWAY SYSTEM - 1988

	_												
PERSONS 4/	RATE 3/	2.233.36 15.801.38 5.676.67	1.605.04 13.982.02 3.198.01	9.674.46 2.973.87 7.158.48	661.80	8.687.86 3.885.32 5.003.64	326.01 1.274.88 386.18	137.64 1.270.82 356.20	1.064.24 8.855.92 2.819.86	171.48 1.310.46 378.05	339.23 3.071.61 859.18	359.38 3.266.58 914.72	LES OF R 30. RJOR TEM UREO
NONFR INJUREO P	NUMBER	74.378 178.966 253.344	362.297 466.202 828.499	888.367 164.187 1.052.554	264.775	21.807 32.128 53.935	107.667 28.506 136.173	294.526 657.193 951.719	701.450 1.697.722 2.399.172	424.000 717.827 1.141.827	1.051.072 2.236.583 3.287.655	1 -125 450 2 -415 549 3 -540 989	989 AND VEHICLE MILES ON LES AS OF SEPTEMBER 30. ES MERE MAGOR MAJOR OF FOERHLAIDS SYSTEM AND NONFATELY INJURED SOUTH CAROLINA.
ITIES	RATE 3/	84.86 203.16 114.88	47.62 127.52 57.90	81.63 22.28 59.35	16.92	117.53 36.16 55.11	6.70 14.00 7.17	2.26 6.79 3.14	30.87	2.97 7.52 3.80	8.03 23.48 10.97	8.84 26.23 12.17	30, 1989 B RY TABLES A STIMATES WE 10NAL OR FE LES. OENTS AND N ESSEE, SOUT
FATALITIES	NUMBER	2.826 2.301 5.127	10.748 4.252 15.000	7.496 1.230 8.726	177.9	220 200 908	2.214 313 2.527	4.839 3.509 8.348	20.345 15.279 35.624	7.348 4.121 11.469	24.867 17.099 41.966	27.693 19.400 47.093	SEPTEMBER MIDE SUMME ISTRATION E L'ETE FUNCT HIGHMAY MI NJURY RCCI IN FOR TENN INA.
1NJURY NTS 4/	RATE 3/	1,364.69 10,305,95 3,633,81	948.78 8.759.01 1.953.99	6.340.80 2.020.15 4.718.45	417.96	5.073.60 2.483.74 3.086.81	217.08 848.55 257.12	92.72 871.65 244.33	647.59 5.751.33 1.797.56	114.39 895.04 255.97	2.027.21 5.027.21 559.34	226.61 2.154.01 594.79	FROM HPHS UNIVERSE OBTB AS OF SEPTEMBER 30, 1989 TRAYEL ARE FROM THE HPHS AREAHIOE SUMHARY TRALES 1989. FEOERAL HIGHARY ADMINISTRATION ESTIMATES A 1989. FEOERAL HIGHARY ADMINISTRATION ESTIMATES A 1984 FEOERAL HIGHARY HIGHARY REPORTED 37 RATES ARE PER 1,000 HIGHARY MILES. 37 TOTALS OF NOWFATAL INJURY ACCIDENTS AND PERSONS HERE ESTIMATED BY FHAR FOR TENNESSEE. SOUSDUTH ORROTAR, AND NORTH CAROLINA.
NONFATAL 1 ACC 10ENT	NUMBER	45.448 116.725 162.173	214.162 292.052 506.214	582,250 111,532 693,782	167.218	12.735 20.538 33.273	71.693 18.974 90.667	198.408 450.764 649.172	426.828 1.102.559 1.529.387	282,836 490,276 773,112	664.216 1.476.110 2.140.326	709.664 1.592.835 2.302.499	HPMS UNIVER VEL ARE FROM 9. FEGERAL H HMAY CATEGORI A WERE NOI RE 3/ RATES F 4/ TOTALS MAY TOTALS MAY TOTALS MAY TOTALS TH ORKOTA. AN
RL ENTS	RRIE 3/	71.86 185.56 100.97	40.61 118.74 50.66	75.49 20.63 54.89	15.07	104.78 30.72 47.96	6.03 12.92 6.47	2.07 6.10 2.86	26.68 73.77 37.29	2.70 6.75 3.44	7.06 21.60 9.83	7.75 24.13 10.88	188 1988 1988 1988 1988 1988 1988
FATAL ACC10ENTS	NUMBER	2.393 2.113 4.506	9.166 3.959 13.125	6.932 1.139 8.071	6.029	263 254 517	1.992 289 2.281	4.433 3.157 7.590	17.588 14.143 31.731	6.688 3.700 10.388	21.883 15.730 37.613	24.276 17.843 42.119	ANO OENTS PORTEO HITH IS
VEHICLE	PER HILE	14.873 62.399 26.934	3.733 22.302 6.123	11.014 3.687 8.263	1.198	3.917 8.498 7.431	456 3,023 618	120 962 284	2.757 13.903 5.269	168 1,160 348	561 3,562 1,132	713 4.463 1.430	IERLTH OF PUERTO RICO AND ON VIEGIN ISLANDS.  NOMFATAL INJURY ACCIDENTS INFEPRATIAL OBTR REPORTEO ING TRRES. TOGETHER WITH HE HIGHMAY PERFORMANCE HIGHMAY MILERGE IS
VEHICLE		181,284 258,662 439,946	308,438 272,160 580,598	370.152 74.509 444.661	175,429	3,598 25,718 29,316	55,063 24,742 79,80S	93,745 182,085 275,830	665.151 975.483 1.640.634	152,406 232,545 384,951	636.273 949.366 1.585.639	817.557 1.208.028 2.025.585	COMMONMERLTH OF URH, RNO VIRGIN ITIES, NONFRIEN RSEO ON THE PRE FOLLOWING THE HIGH FROM THE HIGH
нзениях	MILES 2/	33,303 11,326 44,629	225.724 33.343 259.067	91,826 55,210 147,036	400,081	2.510 8.269 10.779	330,258 22,360 352,618	2,139,793 517,140 2,656,933	659.108 191.705 850.813	2.472.561 547.769 3.020.330	3.098.366 728.148 3.826.514	3.131.669 739.474 3.871.143	EXCLUDE THE SIGN SHORT OF THE SHOTT OF THE SHORT OF THE S
HJCHWRY SYSTEM		INTERSTATE (ARTERIAL) RURAL URBAN TOTAL	DTHER FEDERAL-A10 PRIMARY (ARTERIAL1 RUSAN TOTAL	FEDERAL-A10 URBAN RATERIAL COLLECTOR TOTAL (ALL URBANI	FEDERAL-A10 SECONOARY (COLLECTOR) TOTAL (ALL RURAL)	NON-FECERAL-A10 RETERIAL RUSAL USBAN TOTAL	NON-FEDERRL-R10 COLLECTOR RUBRL RUBRL TOTAL	NON-FEDERAL-A10 LOCAL RURAL URBAN TOTAL	ALL FEDERAL-A10 RURAL URBRN TOTAL	ALL NON-FEOERAL-AIO RURAL URBRN TOTAL	NON-INTERSTATE RURAL URBAN TOTAL	TOTAL RURAL URBAN TOTAL	THE TERRITORIES OF A MERICAN SANDAN. COMMONNE ESTIMATES FOR A MERICAN SANDA. COMMON SOND ESTIMATES FOR FATAL ACCIDENTS. FATALITIES.N AND NONFATALLY INJURED PERSONS ARE BASED ON TOTALS MICH A RE DISPLATED IN THE FOLLOW TOTALS REPORTED BY MOST STAFES.  Z MILEAGE AND TRYBE ORTH ARE FROM THE MONITORING SYSTEM (HPMS) FOR 1988. FEDERAL

### TABLE 8. FATAL AND INJURY ACCIDENT DATA **RELATED TO POPULATION - 1988**

	POPUL	.ATION		RATES PER TH	HOUSANO PERSONS	
STATE	NUM8ER (THOUSANOS)	VEHICLE MILES PER CAPITA	FATAL ACCIDENT RATE	FATALITY RATE	NONFATAL INJURY ACCIOENT RATE	NONFATAL INJURY RATE
ALASAMA	4,102	9.674	0.22	0.25	7.31	10.75
ALASKA	524	7.330	0.16	0.19	6.68	9.95
ARIZONA	3,489	9.816	0.24	0.27	11.07	17.72
ARKANSAS	2,395	8.025	0.22	0.25	4.68	8.60
CALIFORNIA	28.314	8.532	0.17	0.19	8.32	12.61
COLORAGO	3.301	8.381	0.14	0.15	7.76	11.75
CONNECTICUT	3.233	8.061	0.14	0.15	10.23	14.35
OELAWARE	660	9.703	0.22	0.24	8.71	13.68
DIST. OF COL	517	5.519	0.09	0.10	14.97	21.60
FLORIDA	12.335	8.538	0.22	0.25	11.53	I8.68
GEORGIA	6.342	9.817	0.23	0.26	9.99	15.31
HAWAII	1.098	6.757	0.12	0.I3	7.93	11.I4
IOAHO	1.003	8.103	0.23	0.26	7.11	11.14
ILLINOIS	11.614	6.758	0.14	0.16	10.59	15.68
INOIANA	5.556	9.202	0.17	0.20	9.12	13.56
IOWA	2.834	7.730	0.17	0.20	6.75	9.73
KANSAS	2.495	8.481	0.16	0.19	8.60	12.85
KENTUCKY	3.727	8.482	0.19	0.22	9.17	13.99
LOUISIANA	4.408	7.868	0.19	0.21	8.90	17.45
MAINE	1.205	9.461	0.19	0.21	10.51	15.45
MARYLANO	4.622	8.113	0.15	0.17	11.12	18.37
MASSACHUSETTS	5.889	7.358	0.11	0.12	11.28	14.67
MICHIGAN	9.240	8.431	0.16	0.18	11.37	17.31
MINNESOTA	4.307	8.462	0.13	0.14	7.14	10.31
MISSISSIPPI	2.620	8.413	0.24	0.28	4.96	9.25
MISSOURI	5.141	8.864	0.19	0.21	8.64	13.46
MONTANA	805	10.109	0.23	0.25	6.83	10.23
NE8RASKA	1.602	8.369	0.15	0.16	9.30	13.87
NEVADA	1.054	8.528	0.24	0.27	9.65	14.70
NEW HAMPSHIRE	1.085	8.762	0.14	0.15	7.13	10.04
NEW JERSEY	7.721	7.599	0.13	0.14	12.46	19.63
NEW MEXICO	1.507	10.141	0.29	0.32	11.37	17.80
NEW YORK	17.909	5.790	0.12	0.13	10.98	16.12
NORTH CAROLINA	6.489	8.929	0.22	0.24	4.91	8.11
NORTH OAKOTA	667	8.643	0.14	0.16	5.12	7.22
OHIO	10.855	7.553	0.15	0.16	11.65	19.20
OKLAHOMA	3.242	9.990	0.17	0.20	6 · 21	9.73
OREGON	2.767	9.109	0.21	0.24	7 · 80	12.60
PENNSYLVANIA	12.001	6.769	0.15	0.16	8 · 35	12.83
RHOOE ISLANO	993	5.894	0.12	0.13	8 · 59	10.92
SOUTH CAROLINA	3.470	9.152	0.26	0.30	8.95	14.61
SOUTH DAKOTA	713	9.304	0.18	0.21	6.25	9.23
TENNESSEE	4.895	9.028	0.23	0.26	1/ -	1/ -
TEXAS	16.841	9.290	0.18	0.20	9.03	14.18
UTAH	1.690	7.848	0.15	0.18	8.67	13.07
VERMONT	557	9.969	0.21	0.23	8.74	13.15
VIRGINIA	6.015	9.552	0.16	0.18	8.64	12.92
WASHINGTON	4.648	8.996	0.15	0.17	10.65	15.59
WEST VIRGINIA	1.876	7.401	0.22	0.25	9.83	15·12
WISCONSIN	4.855	8.745	0.15	0.17	8.40	12·14
WYOMING	479	11.812	0.27	0.32	6.99	10·77
U.S. TOTAL	245.807	8.241	0.17	0.19	2/ 9.37	3/ 14.41

RATE COULO NOT 8E COMPUTEO 8ECAUSE OATA WAS NOT REPORTEO OR WAS NOT USABLE.
THE RATE 1S 8ASEO ON THE ESTIMATEO U. S. TOTAL OF NONFATAL INJURY ACCIOENTS FROM TABLE 2.
THE RATE IS 8ASEO ON THE ESTIMATEO U. S. TOTAL OF NONFATALLY INJUREO PERSONS FROM TABLE 2.

### TABLE 9. FATAL AND INJURY ACCIDENT DATA RELATED TO LICENSED DRIVERS - 1988

	LICENSEC	ORIVERS	RATES PER THOUSAND ORIVERS							
STATE	NUM8ER (THOUSANOS)	VEHICLE MILES PER ORIVER	FATAL ACCIOENT RATE	FATALITY RATE	NONFATAL INJURY ACCIOENT RATE	NONFATAŁ INJURY RATE				
ALABAMA	2.098	18.915	0.44	0.49	14.30	21.01				
ALASKA	300	12.803	0.29	0.32	11.67	17.38				
ARIZONA	2.352	14.561	0.36	0.40	16.43	26.29				
ARKANSAS	1.677	11.460	0.32	0.36	6.68	12.28				
CALIFORNIA	18.926	12.764	0.26	0.28	12.44	18.86				
COLORADO	2.226	12.428	0.20	0.22	11.51	17.43				
CONNECTICUT	2.370	10.997	0.19	0.20	13.95	19.58				
OELAWARE	469	13.655	0.30	0.34	12.26	19.25				
OIST. OF COL.	392	8.686	0.14	0.15	23.56	34.01				
FLORIOA	8,790	I1.982	0.3I	0.35	16.19	26.21				
GEORGIA	4,336	14.359	0.34	0.38	14.62	22.39				
HAWAII	635	11.683	0.20	0.23	13.71	19.27				
IOAHO	708	11.479	0.32	0.36	10.08	15.78				
ILLINOIS	7.263	10.806	0.23	0.25	16.93	25.08				
INOIANA	3.773	13.550	0.25	0.29	13.43	19.97				
IOWA	1.887	11.609	0.26	0.30	10.13	14.61				
KANSAS	1.706	12.404	0.24	0.28	12.58	18.80				
KENTUCKY	2.368	13.351	0.30	0.35	I4.43	22.03				
LOUISIANA	2.598	13.349	0.32	0.36	15.11	29.61				
MAINE	867	13.150	0.27	0.29	14.61	21.47				
MARYLANO	3.137	11.953	0.23	0.25	16.39	27.07				
MASSACHUSETTS	4.250	10.196	0.16	0.17	I5.63	20.33				
MICHIGAN	6.389	12.193	0.24	0.27	16.44	25.03				
MINNESOTA	2.479	14.702	0.22	0.25	12.40	17.92				
MISSISSIPPI	1.814	12.152	0.35	0.40	7.16	13.36				
MISSOURI	3.512	12.976	0.28	0.31	12.65	19.70				
MONTANA	534	15.240	0.34	0.37	10.29	15.42				
NEBRASKA	1.088	12.323	0.22	0.24	13.69	20.42				
NEVAOA	749	12.001	0.34	0.38	13.57	20.69				
NEW HAMPSHIRE	798	II.9I4	0.19	0.21	9.70	13.65				
NEW JERSEY	5.452	I0.761	0.18	0.19	17.64	27.80				
NEW MEXICO	1.047	I4.597	0.41	0.47	16.36	25.62				
NEW YORK	10.143	10.223	0.20	0.22	19.39	28.47				
NORTH CAROLINA	4.422	13.103	0.32	0.36	7.21	I1.90				
NORTH OAKOTA	431	13.376	0.21	0.24	7.93	II.I8				
OHIO	7.379	11.111	0.21	0.24	17.14	28.24				
OKLAHOMA	2.219	14.596	0.25	0.29	9.07	14.21				
OREGON	2.170	1'.615	0.26	0.31	9.94	16.07				
PENNSYLVANIA	7.732	IJ.507	0.23	0.25	12.96	19.92				
RHOOE ISLANO	666	8.788	0.18	0.19	I2.81	16.28				
SOUTH CAROLINA	2.306	13.772	0.39	0.45	13.47	21.99				
SOUTH DAKOTA	483	13.735	0.26	0.30	9.22	13.62				
TENNESSEE	3.199	13.815	0.35	0.40	1/ -	1/ -				
TEXAS	11.081	14.119	0.27	0.31	13.72	21.55				
UTAH	978	13.561	0.26	0.30	14.99	22.58				
VERMONT	406	13.677	0.29	0.32	11.99	18.04				
VIRGINIA	4.130	13.911	0.24	0.26	12.58	18.82				
WASHINGTON	3.198	13.074	0.22	0.24	15.47	22.65				
WEST VIRGINIA	1.308	10.615	0.31	0.35	14 · 10	21.68				
WISCONSIN	3.268	12.992	0.22	0.25	12 · 48	18.03				
WYOMING	349	16.212	0.37	0.44	9 · 59	14.78				
U.S. TOTAL	162.852	12.438	0.26	0.29	2/ 14.14	<u>3</u> / 21.74				

PATE COULD NOT BE COMPUTED BECAUSE DATA WAS NOT REPORTED.
THE PATE IS BASED ON THE ESTIMATED U. S. TOTAL OF NONFATAL INJURY ACCIDENTS FROM TABLE 2.
THE PATE IS BASED ON THE ESTIMATED U. S. TOTAL OF NONFATALLY INJURED PERSONS FROM TABLE 2.

### TABLE 10 FATAL AND INJURY ACCIDENT DATA RELATED TO VEHICLE REGISTRATIONS - 1988

	REGISTERE	VEH1CLE5		RATES PER THE	DUSANO VEHICLES	
STATE	NUM8ER (THOUSANOS)	VEHICLE MILES PER VEHICLE	FATAL ACC10ENT RATE	FATALITY RATE	NONFATAL INJURY ACC10ENT RATE	NONFATAL INJURY RATE
ALABAMA	3.881	10.225	0.24	0.26	7.73	11.36
ALASKA	362	10.610	0.24	0.27	9.67	14.41
ARIZONA	2.705	12.661	0.31	0.35	14.28	22.86
ARKANSAS	1.427	13.468	0.37	0.43	7.85	14.43
CALIFORNIA	21.337	11.322	0.23	0.25	11.04	16.73
COLORADO	2.923	9.465	0.15	0.17	8.76	13.27
CONNECTICUT	2.652	9.827	0.17	0.18	12.47	17.50
OELAWARE	512	12.508	0.28	0.31	11.23	17.63
OIST. OF COL	264	12.898	0.21	0.23	34.98	50.49
FLORIOA	10.984	9.588	0.25	0.28	12.95	20.97
GEORGIA	5.196	11.983	0.29	0.32	12.20	18.68
HAWAII	705	10.523	0.18	0.21	12.35	17.36
10AHO	940	8.646	0.24	0.27	7.59	11.89
ILLINO1S	7.865	9.979	0.21	0.23	15.64	23.16
INOIANA	4.169	12.263	0.22	0.26	12.16	18.08
IOWA	2.568	8.531	0.19	0.22	7.45	10.74
KANSAS	2.210	9,575	0.18	0.22	9.71	14.51
KENTUCKY	2.795	11,311	0.26	0.30	12.22	18.66
LOUISIANA	2.938	11,805	0.28	0.31	13.36	26.18
MAINE	941	12,116	0.24	0.27	13.46	19.79
MARYLANO	3.468	10.813	0.21	0.23	14.83	24.49
MASSACHUSETTS	3.818	11.350	0.18	0.19	17.40	22.63
MICHIGAN	7.141	10.909	0.21	0.24	14.71	22.40
MINNESOTA	3.210	11.354	0.17	0.19	9.58	13.84
MISSISSIPPI	1.787	12.335	0.35	0.40	7.27	13.56
MISSOURI	3.794	12.011	0.26	0.29	11.71	18.23
MONTANA	723	11.256	0.25	0.27	7.60	11.39
NEBRASKA	1.328	10.096	0.18	0.20	11.21	16.73
NEVAOA	808	11.125	0.32	0.35	12.58	19.18
NEW HAMPSHIRE	928	10.245	0.16	0.18	8.34	11.74
NEW JERSEY	5.738	10.225	0.17	0.18	16.76	26.41
NEW MEX1CO	1.267	12.062	0.34	0.38	13.52	21.18
NEW YORK	9.838	IO.540	0.21	0.23	20.00	29.35
NORTH CAROLINA	5.023	11.536	0.28	0.31	6.35	10.48
NORTH OAKOTA	655	8.802	0.14	0.16	5.22	7.36
OHIO	8.612	9.520	0.18	0.20	14.69	24.20
OKLAHOMA	2.554	12.681	0.22	0.25	7.88	12.35
OREGON	2.316	10.883	0.25	0.29	9.32	15.05
PENNSYLVANIA	7.766	10.461	0.23	0.25	12.91	19.83
RHOOE ISLANO	671	8.723	0.18	0.19	12.72	16.16
SOUTH CAROLINA	2.414	13.156	0.38	0.43	12.87	21.01
SOUTH OAKOTA	693	9.573	0.18	0.21	6.43	9.49
TENNESSEE	4.225	10.460	0.26	0.30	1/ -	1/ -
TEXAS	12.406	12.611	0.24	0.27	12.25	19.25
UTAH	1.159	11.443	0.22	0.26	12.65	19.05
VERMONT	453	12.258	0.26	0.28	10.75	16.17
VIRGINIA	4.670	12.303	0.21	0.23	11.13	16.65
WASHINGTON	3.887	10.757	0.18	0.20	12.73	18.64
WEST VIRGINIA	1.287	10.788	0.31	0.36	14.33	22.03
WISCONSIN	3.901	10.884	0.18	0.21	10.45	15.11
WYOMING	482	11.739	0.27	0.32	6.95	10.70
U.S. TOTAL	184.395	10.985	0.23	0.26	2/ 12-49	<u>3</u> / 19.20

RATE COULO NOT BE COMPUTED BECAUSE DATA WAS NOT REPORTED.
THE RATE 15 BASED ON THE ESTIMATED U. S. TOTAL OF NONFATAL INJURY ACCIDENTS FROM TABLE 2.
THE RATE IS BASED ON THE ESTIMATED U. S. TOTAL OF NONFATALLY INJURED PERSONS FROM TABLE 2.

### SECTION IV--PUERTO RICO AND U.S. TERRITORIES

Travel and accident data reported by Puerto Rico and the U.S. Territories for calendar year 1988 are not yet available.

### SECTION V--RELATIONSHIP OF FATALITY RATES TO TRAVEL DENSITY

The vehicle mile fatality rate is the measure most commonly used for comparing the safety of different highway systems or the safety of highways in different States. A State often judges its own performance by comparing its fatality rates with the national fatality rate. The primary reason for differences in fatality rates appears to be variation in travel density over which the States have little control. Because the travel density varies widely among the States, it should not be expected that all States will have similar fatality rates. There are many reasons other than variation in travel density for differences among the fatality rates of the States. It is difficult to quantify these reasons well enough to develop reliable definitions of relationships between fatality rates and specific features.

The general characteristics of the relationship between fatality rates and travel density were described in Section I. Curves illustrating provisional rate-density relationships have been derived from reported data for the 4-year period from 1984 through 1987. The relationships must be regarded as provisional because they are based on data which are incomplete and known to contain errors. Despite their flaws, the curves provide a more suitable base than the national fatality rate for evaluating State rates. A curve describing the provisional rate-density relationship for all highways in the States is shown in Figure 7-A1.

In comparing State fatality rates a second consideration should be taken into account. Even if the risk (probability) of traffic fatalities were dependent only on travel density, rates would vary at random from those on the rate-density curve. Accidents and related rates are "random" in a statistical sense. Any attempt to drive a vehicle a given distance may or may not result in an accident. There is, nonetheless, a degree of statistical regularity which permits reasonably reliable estimation of the number of accidents expected from a large number of attempts. To speak of accidents as random events is not to say that accidents are unrelated to driving hazards or driver skill. The random variation of fatality rates is larger when the volume of traffic is small. For example, a random variation of 10 percent would be much more likely to occur in the Delaware fatality rate than in fatality rates for California or New York.

The random variation of fatality rates is somewhat analogous to the random variation observed when flipping a coin repeatedly. If the probability of "heads" is 1 in 2, the ratio of the number of heads to the number of flips approaches 1/2 as the number of flips increases. Similarly, if the probability that a fatality will result from an attempt to drive one vehicle mile is 3 in 100 million, the ratio of fatalities to vehicle miles will approach 3/(100 million) as the number of vehicle miles increases. While the number of vehicle miles or flips of a coin is increasing, ratios vary at random. The amount of variation can be computed by applying the binomial probability law for the appropriate number of vehicle miles or flips. Approximations of the binomial law are commonly used to simplify computation.

The application of the binomial probability law to accident rates yields results that approximate observed experience. This procedure is widely used by the States to identify hazardous sections of highway. It does not give precise results primarily because the probability of a fatality (or other event of interest) is not the same for every attempt that is made to drive a vehicle mile without an accident.

The rate-density curve in Figure 7-A1 is an exponential curve fitted to the data points by a weighted least squares procedure. Each data point is defined by a State fatality rate and travel density for the 4-year period. The point is weighted in proportion to the vehicle miles of travel in the State during those 4 years.

Because the volume of travel is different for each State, the magnitude of random variation is also different. To illustrate the effect of the differences, provisional ranges have been computed (Figure 7-A2). For each State, the observed 1988 fatality rate is shown along with a provisional range centered upon a value taken from the rate density curve in Figure 7-A1. If variations from rates on the rate-density curve in Figure 7-A1 followed a binomial distribution, the probability would be 99 out of 100 that each observed rate would fall within the provisional range shown in Figure 7-A2. Conversely, the chances would be only 1 in 100 that an observed rate would fall outside the provisional range if the risk were the same in 1988 as in the preceding 4 years and variation from the rate-density curve were random. If a rate falls above or below the range shown, it is likely that it is unusually high or low for some reason other than random variation. Figure 7-A2 shows that most State fatality rates varied significantly from the provisional rate-density curve. The 1988 fatality rates were about the same for Maine and Ohio. Yet, Ohio's rate was substantially lower than State rates observed for a similar travel density in the preceding 4-year period. Maine's rate, on the other hand, is within the provisional range, where deviation from the rate-density curve is less significant. Analysis of the possible reasons for the low rate in Ohio and the rates outside provisional ranges in many other States is beyond the scope of this report. In Figure 7-A2, States are arranged in order of travel density to facilitate comparison of States with similar travel densities; the State with the most vehicle miles per mile of highway (i.e., the highest average daily traffic) is at the top

Figures 7-B1, 7-B2a, and 7-B2b, show the rural and urban fatality rates for each State separately and in the same manner as the information in Figures 7-A1 and 7-A2.

Other provisional range relationships, as well as provisional rate changes and observed fatality rates for the highway systems in each State, are shown in Figures 7-Cla through 7-F2b. Provisional range relationships are shown for the Interstate urban and rural systems separately

For every system, most fatality rates observed in 1988 were rarely above the provisional range based on 1984 through 1987 experience (Figure 7).

### USING RATE-DENSITY RELATIONSHIPS

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Rate-density curves may be regarded as sets of provisional national norms for fatality rates. Figure 7-Al on page 56 shows the rate-density curve for all roads in the United States.

For a particular State, the value of the provisional national norm depends on the daily number of vehicle miles per mile of highway--or average daily traffic (ADT) in that State. For a State with a daily average of 2,000 vehicle miles of travel per mile of highway, Figure 7-A1 indicates that a normal fatality rate would be slightly under 2.5 fatalities per 100 million vehicle miles.

Some random deviation of State rates from provisional national Most of this random deviation would fall norms is expected. within provisional ranges such as those shown in Figure 7-A2 on page 57. Differences in the width of provisional ranges reflect differences in volumes of travel; ranges are widest in the States with 'the least travel. When State rates fall above or below the provisional ranges, the deviation from the provisional national norm is likely to be caused by something other than random variation. Possible causes include effective safety programs, hazardous highways, inconsistent data, manv other and contributing factors.

Figure 7 may be used to answer questions such as:

1. Where are successful safety programs most likely to be found?

Those States where the 1988 fatality rate is to the left of the provisional range are most likely to have successful safety programs. See Figures 7-A2, -B2, etc.

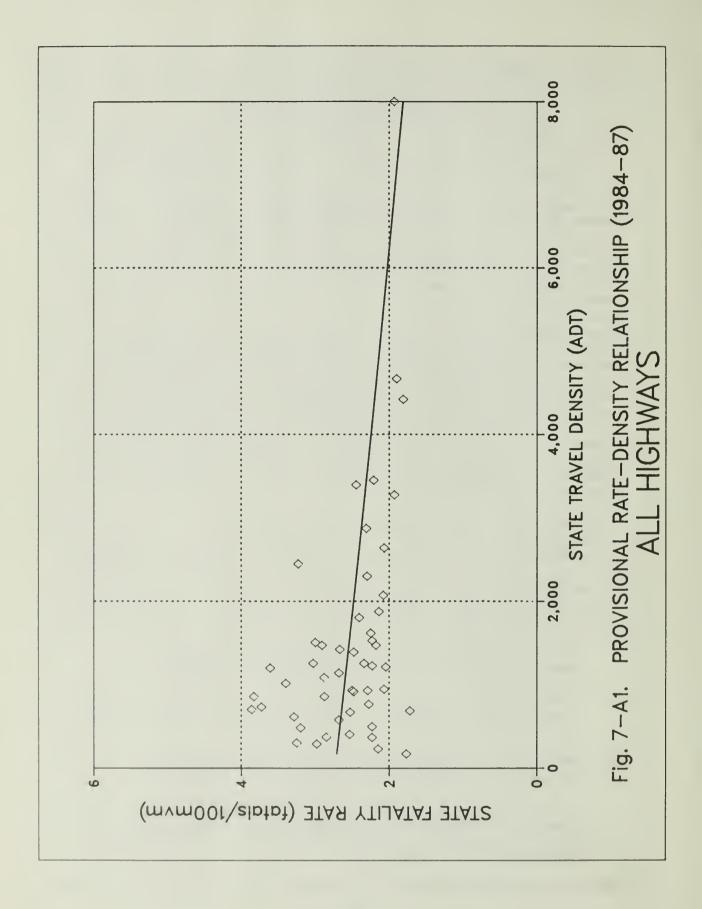
2. Are safety programs in a particular State more likely to have been successful on some systems than on others?

Safety programs are more likely to have been successful on those highway systems where the 1988 fatality rate is to the left of the provisional range. See Figures 7-C2, -D2, etc.

3. Where, in a particular State, is the greatest potential for improvement of safety programs likely to be found?

The greatest potential for reduction of traffic deaths in a State is likely to be on those highway systems where the 1988 fatality rate is to the right of the provisional range. See Figures 7-C2, -D2, etc.

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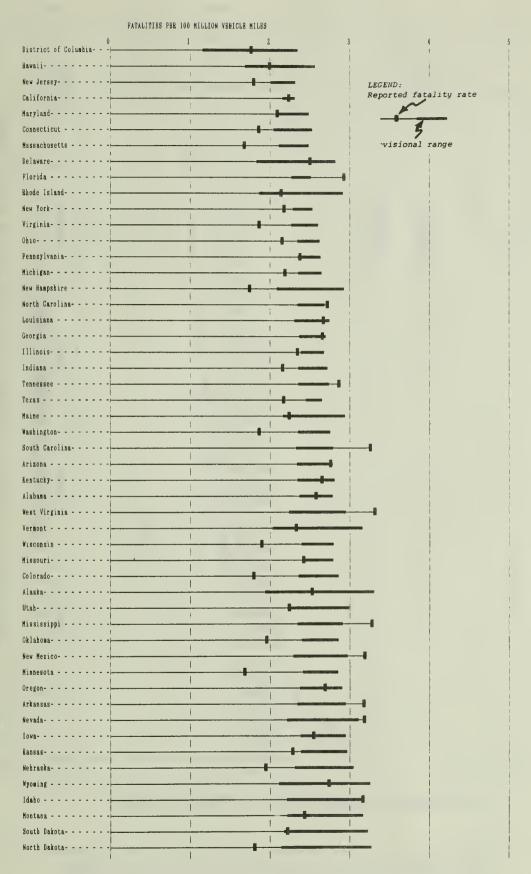
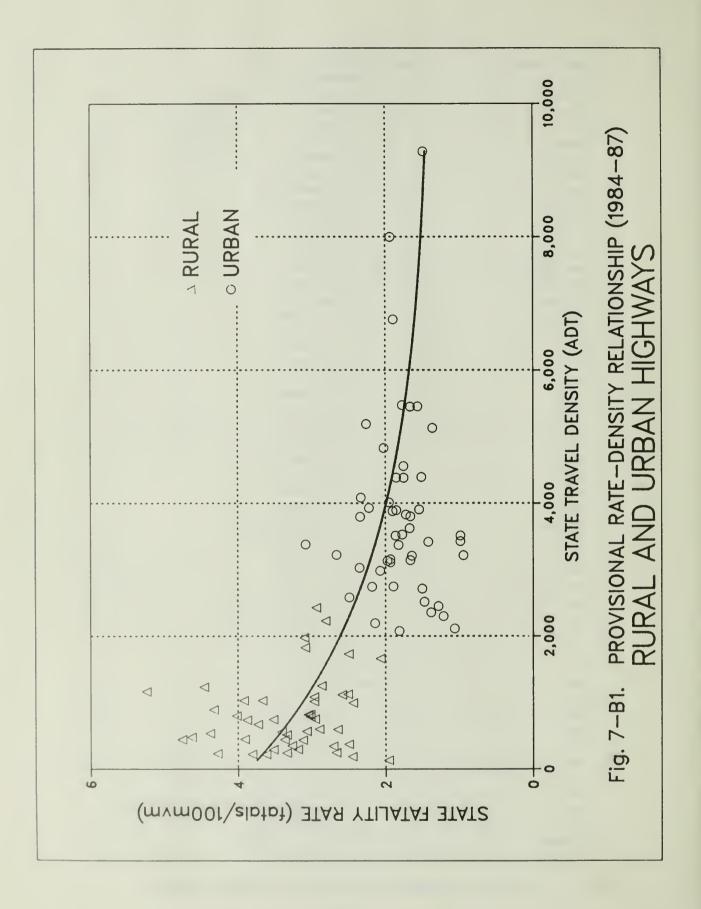


Figure 7-A2 FATALITY RATE BY STATE--ALL HIGHWAYS (1988)



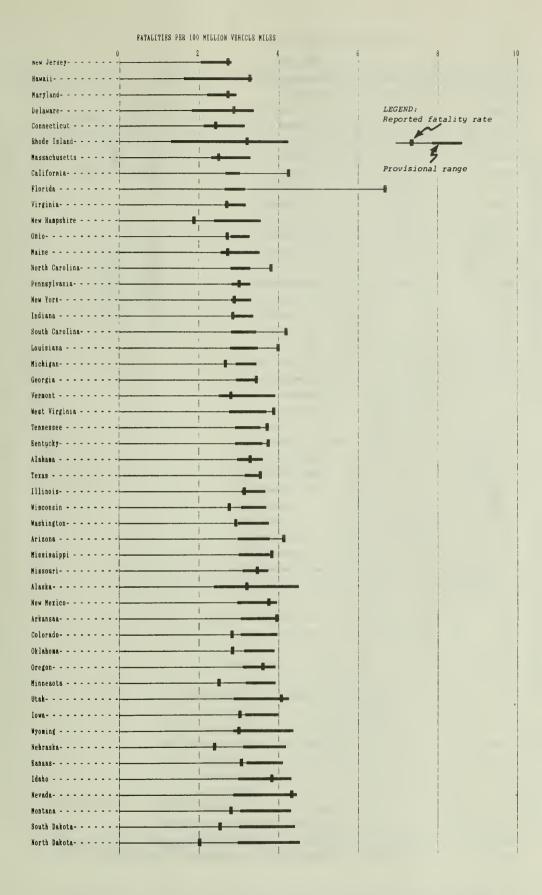


Figure 7-B2a FATALITY RATE BY STATE-ALL RURAL HIGHWAYS (1988)

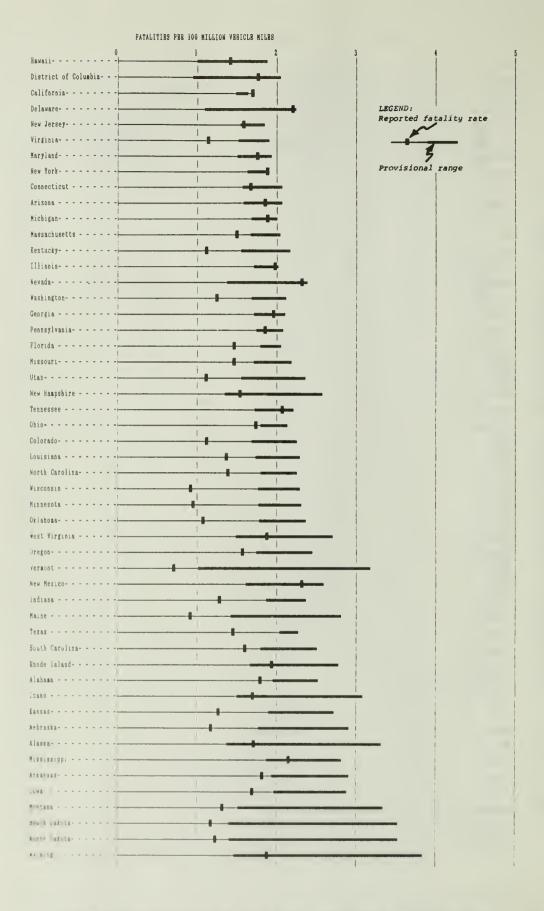
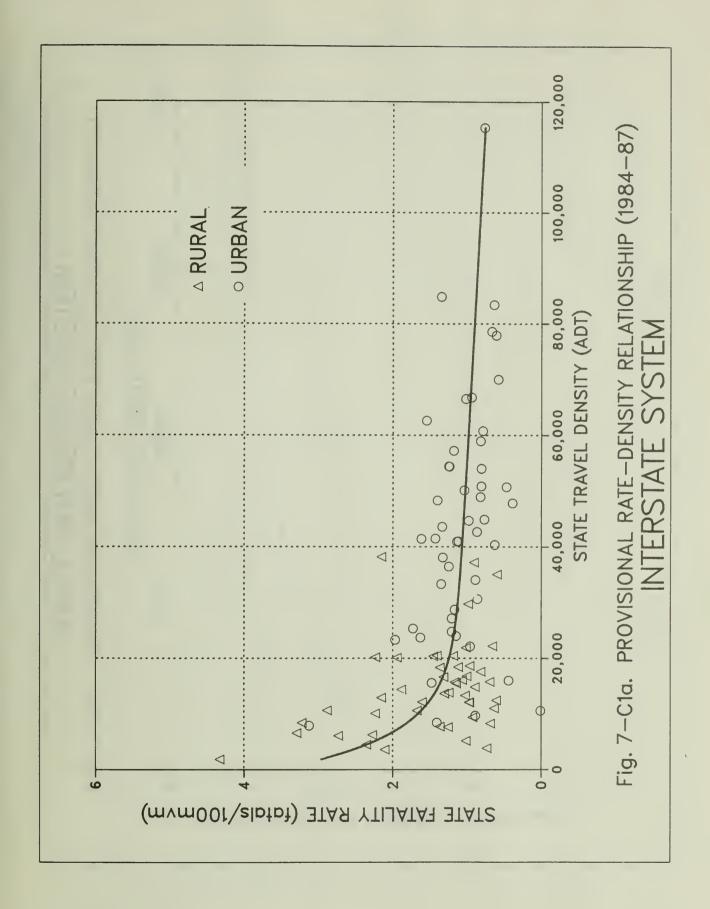
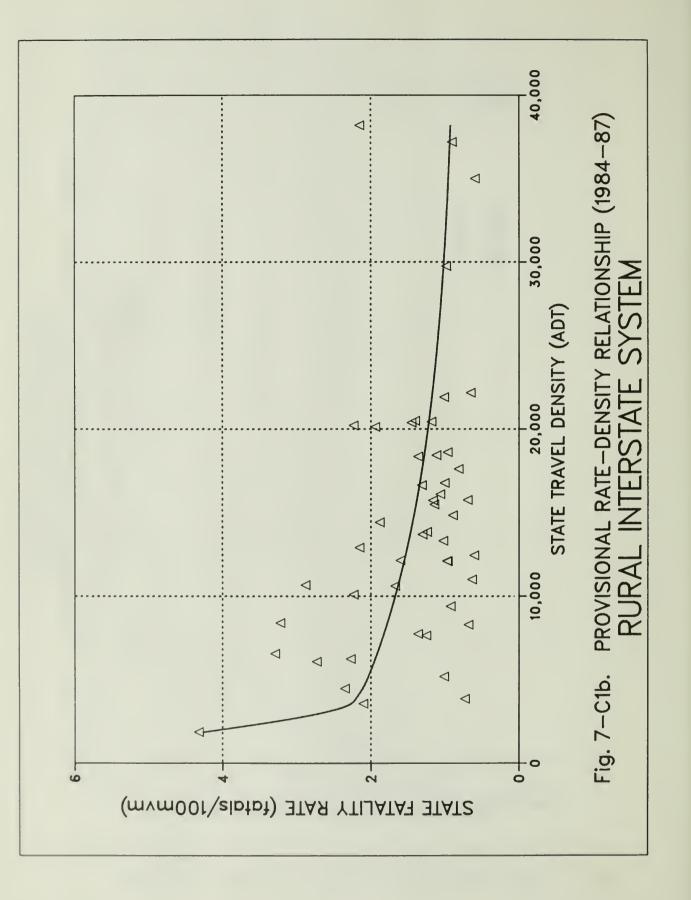
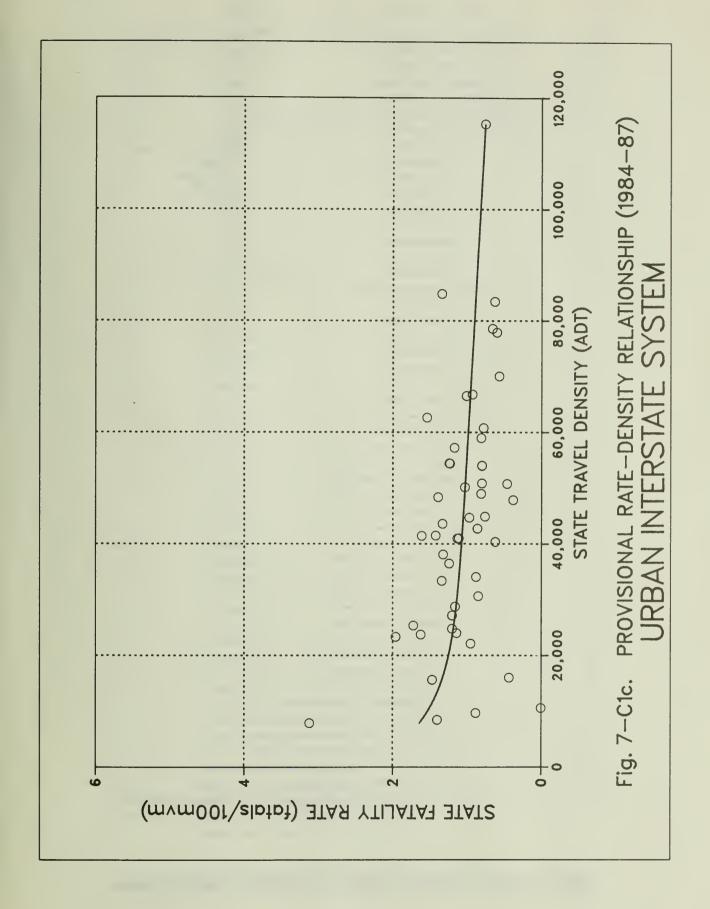


Figure 7-B2b FATALITY RATE BY STATE-ALL URBAN HIGHWAYS (1988)







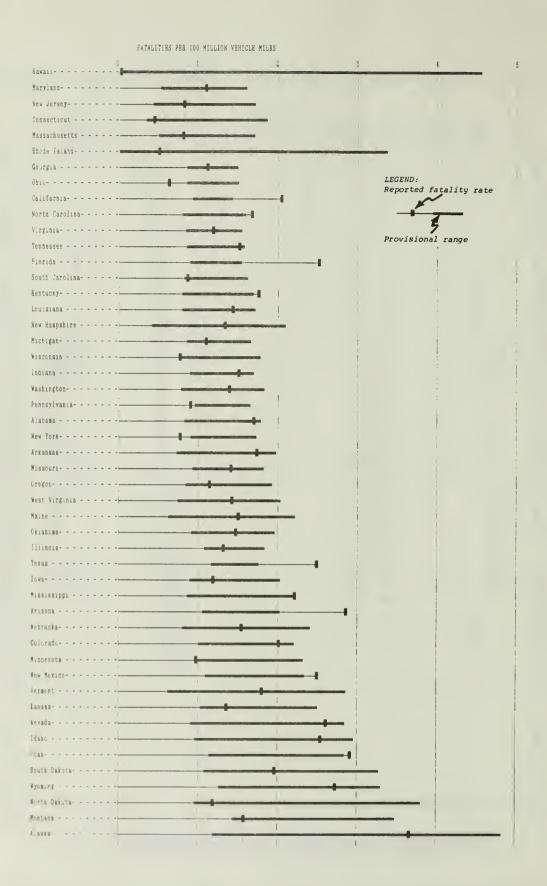


Figure 7-C2a FATALITY RATE BY STATE-RURAL INTERSTATE HIGHWAYS (1988)

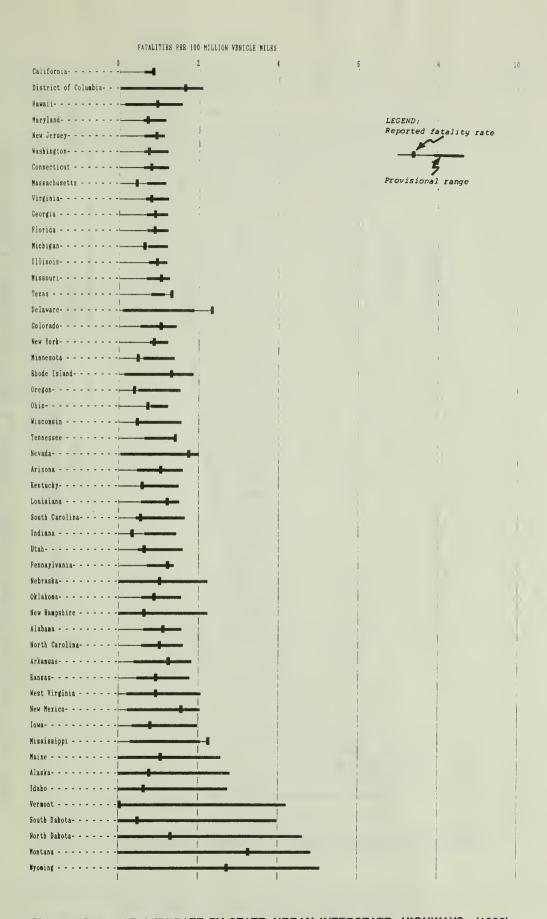
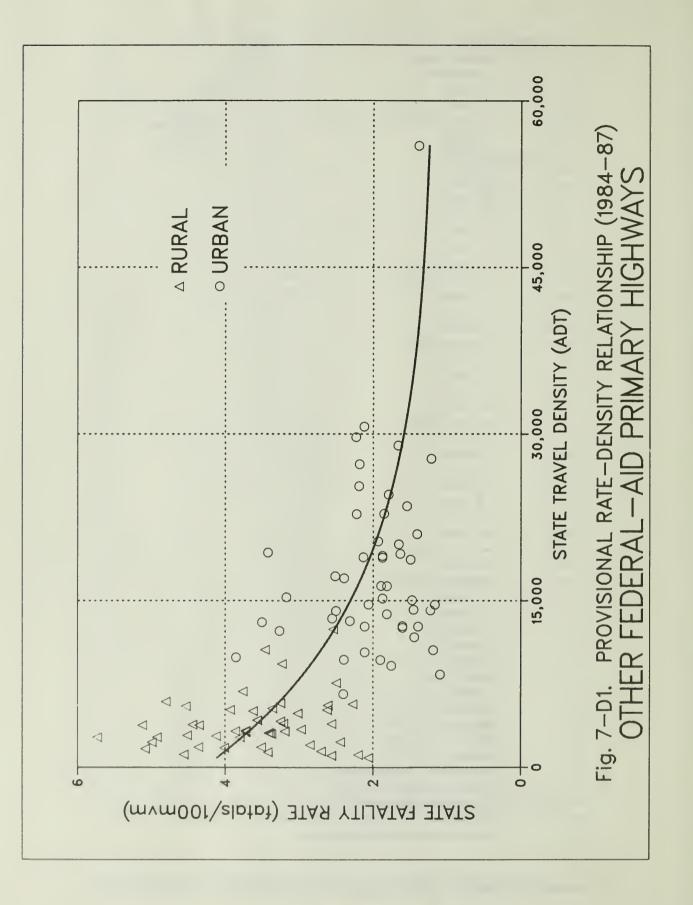


Figure 7-C2b FATALITY RATE BY STATE-URBAN INTERSTATE HIGHWAYS (1988)



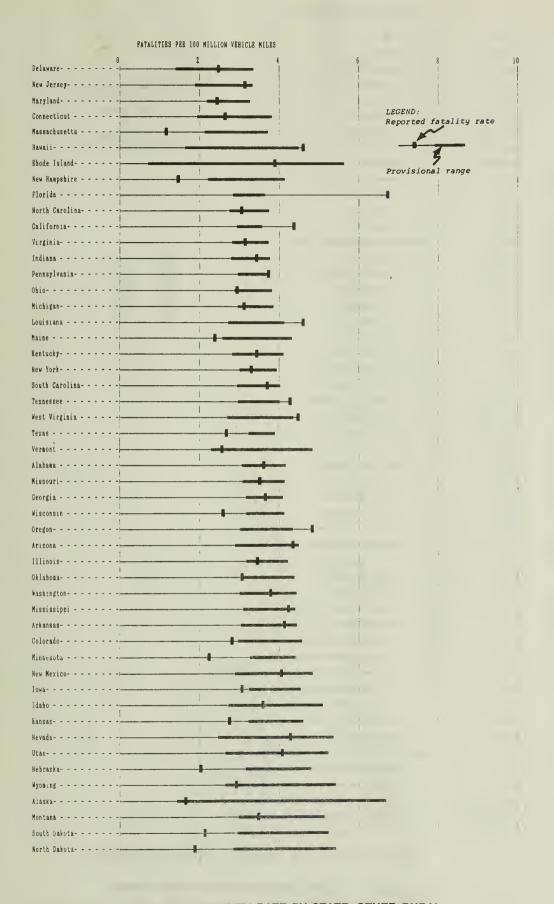


Figure 7-D2a FATALITY RATE BY STATE-OTHER RURAL FEDERAL-AID PRIMARY HIGHWAYS (1988)

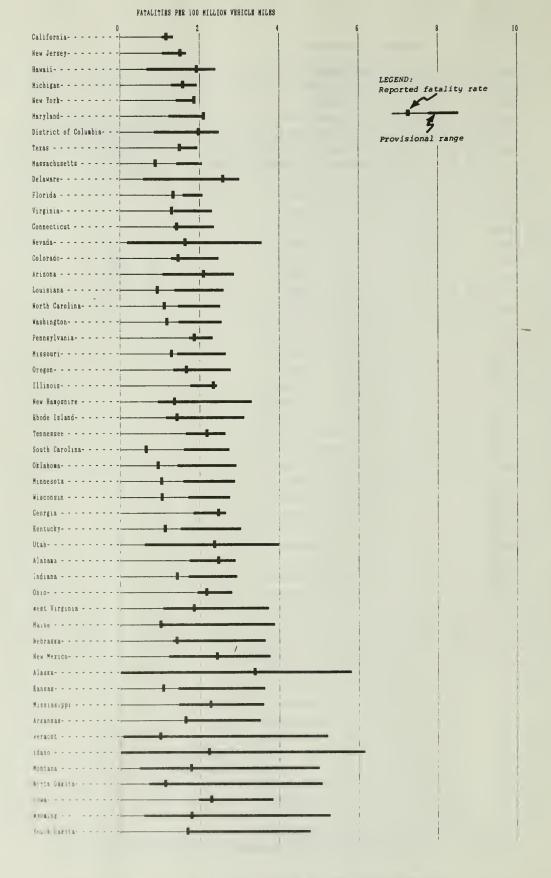
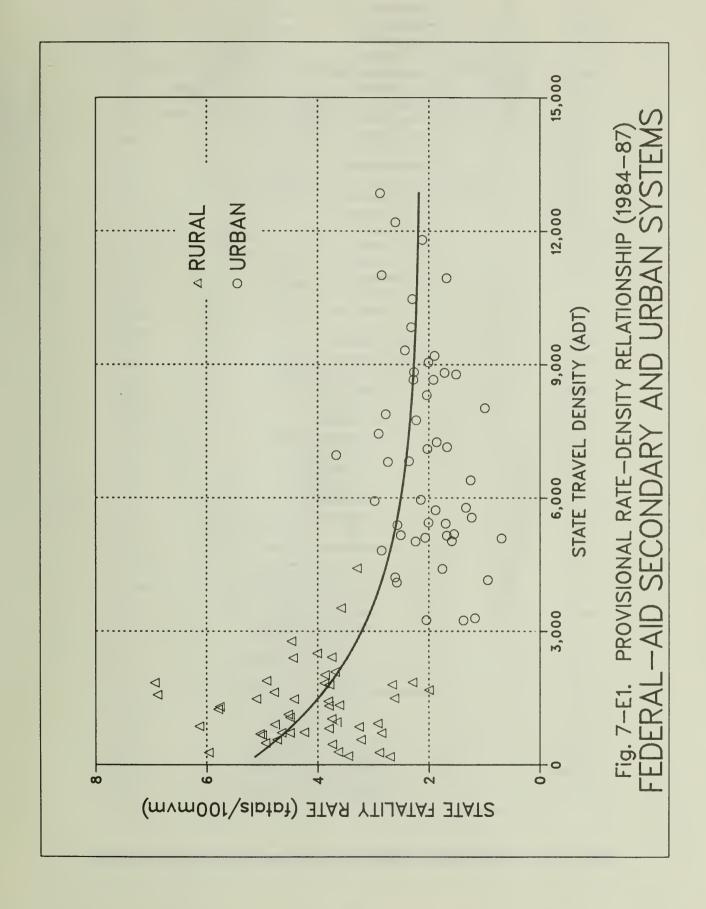


Figure 7-D2b FATALITY RATE BY STATE-OTHER URBAN FEDERAL-AID PRIMARY HIGHWAYS (1988)



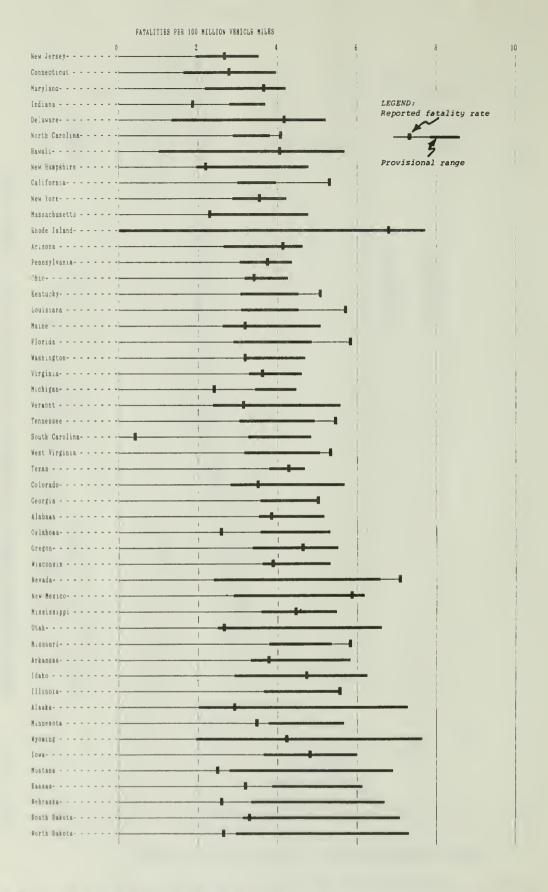


Figure 7-E2a FATALITY RATE BY STATE-FEDERAL-AID SECONDARY HIGHWAYS (1988)

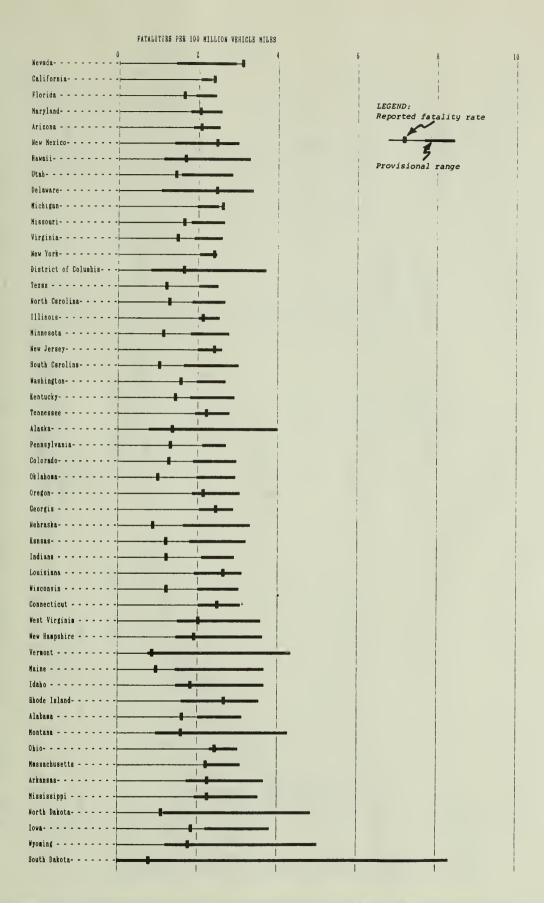
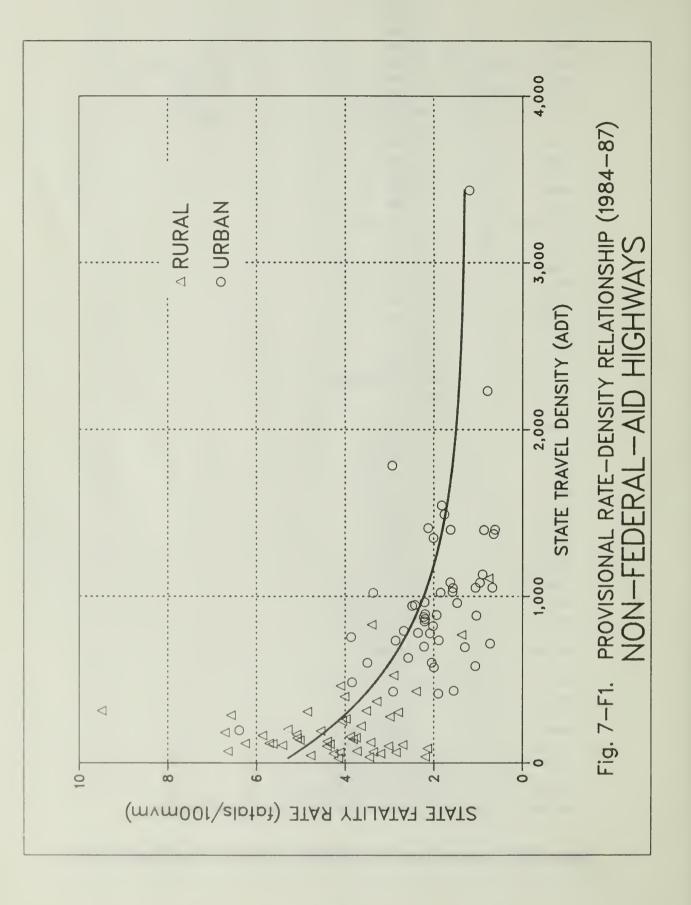


Figure 7-E2b FATALITY RATE BY STATE-FEDERAL-AID URBAN SYSTEM HIGHWAYS (1988)



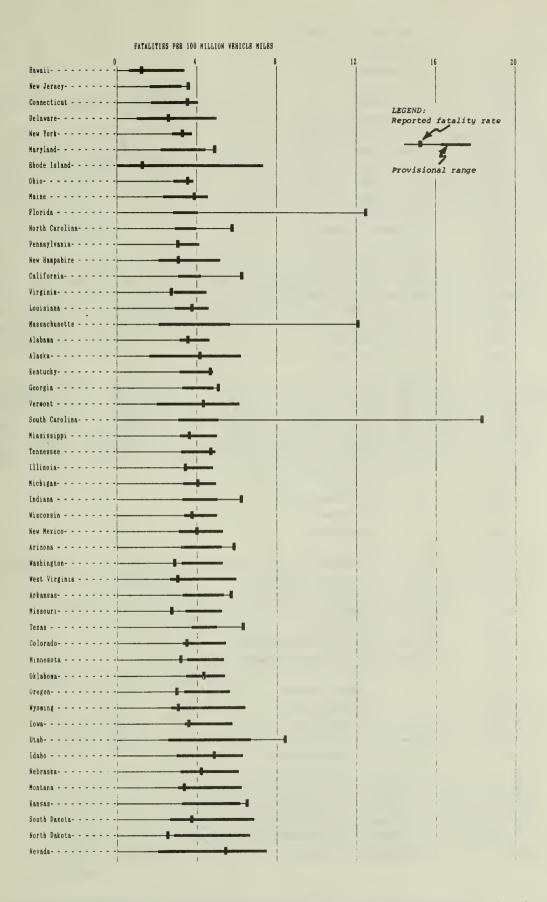


Figure 7-F2a FATALITY RATE BY STATE-RURAL NON-FEDERAL-AID HIGHWAYS (1988)

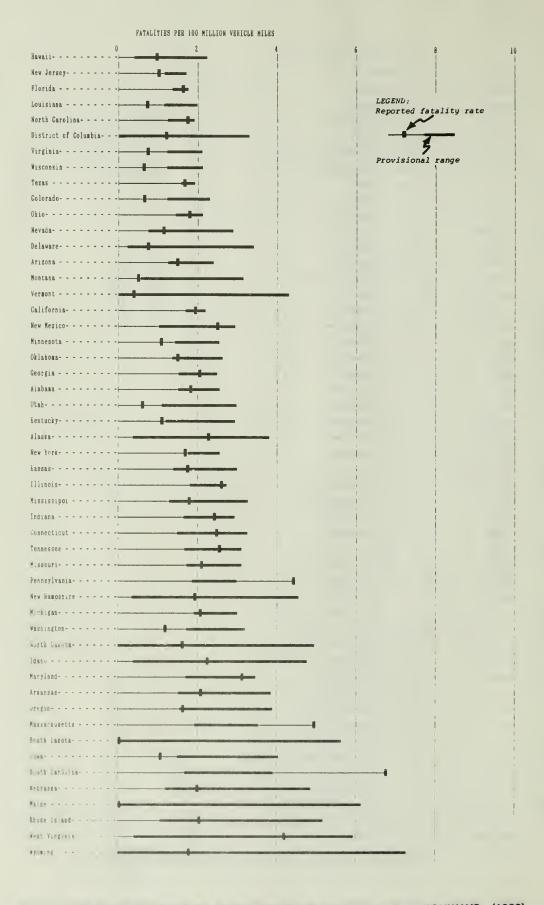


Figure 7-F2b FATALITY RATE BY STATE-URBAN NON-FEDERAL-AID HIGHWAYS (1988)

## SECTION VI--STATE FATALITY RATE TRENDS

It is sometimes more useful to know the trend within a State than to know how that State compares with others. Figure 8 illustrates changes in State rates over the 5-year period from 1984 through 1988. The provisional range for each of the 5 years is based on the provisional rate-density curve for the 4-year period preceding each year. This is a change from the way the provisional ranges were presented in this series of reports for Figure 8 since the 1982 report.

Figure 8 is designed to show, within each State, the pattern of observed rates over the 5-year period and the relationship of observed rates to provisional ranges. Because of differences in the magnitude of individual State rates, not all States are shown at the same scale. It is not intended that Figure 8 be used to compare the magnitude of fatality rates in different States.

While New Hampshire demonstrates steadily decreasing fatality rates throughout the 5-year period, others report little improvement since 1984. In more than half the States, the rate reported for 1988 is lower than the rates for the preceding year. There were 18 States which had a 1988 fatality rate above the provisional range. By comparison, the lowest number occurred in 1985 when the number of States was five.

\* حاو 40 Figure 8 may be used to answer questions such as: حاب 1 \* Are the fatality rates in a State improving? 1 \* \* \* Most States show steadily improving fatality rates. A few \* do not. See pages 76-86. \* \* 1 2. How have fatality rates in a particular State \* \* with those in the rest of the United States over the past \* \* five years? -1-For any year in a selected State, a fatality rate to the 350 left of the provisional range indicates that the State \* 3/0 fatality rate is significantly below the 1984-1987 national -1--1experience for States with similar travel density. 步 30 fatality rate to the right of the provisional range significantly above such national experience. \* See pages -1-杂 76-86. \* 4 -1-

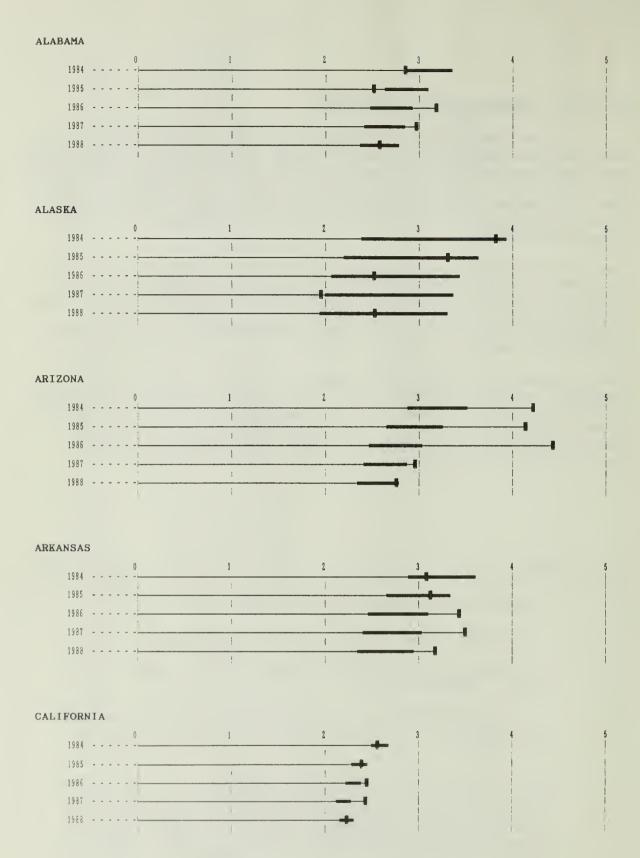


Figure 8 STATE FATALITY RATES (1984-1988)

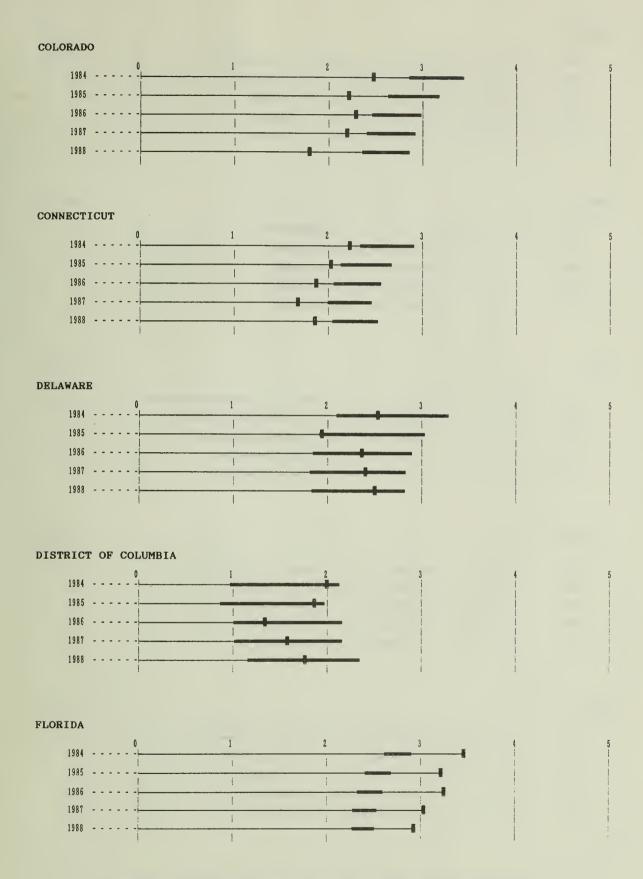


Figure 8 (continued) STATE FATALITY RATES (1984-1988)

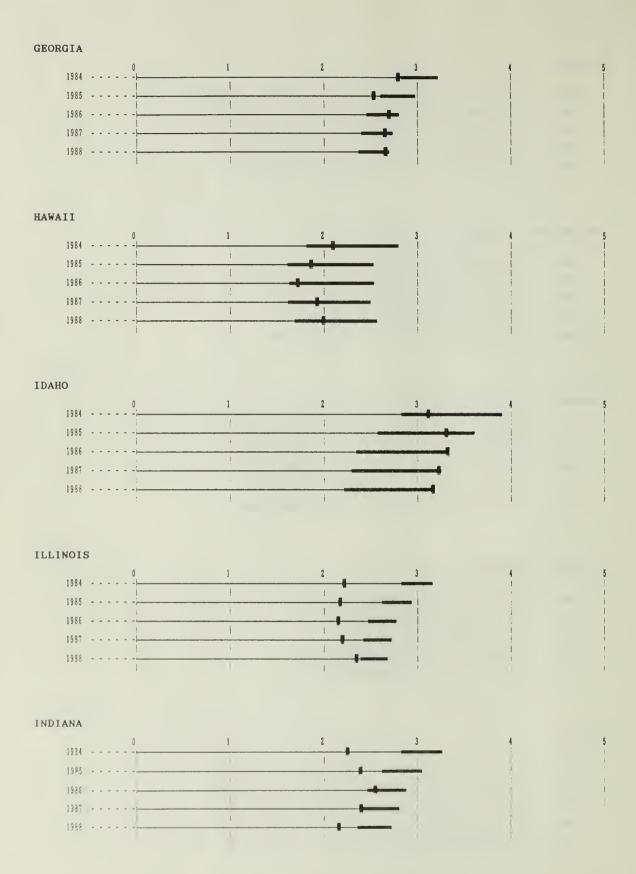


Figure 8 (continued) STATE FATALITY RATES (1984-1988)

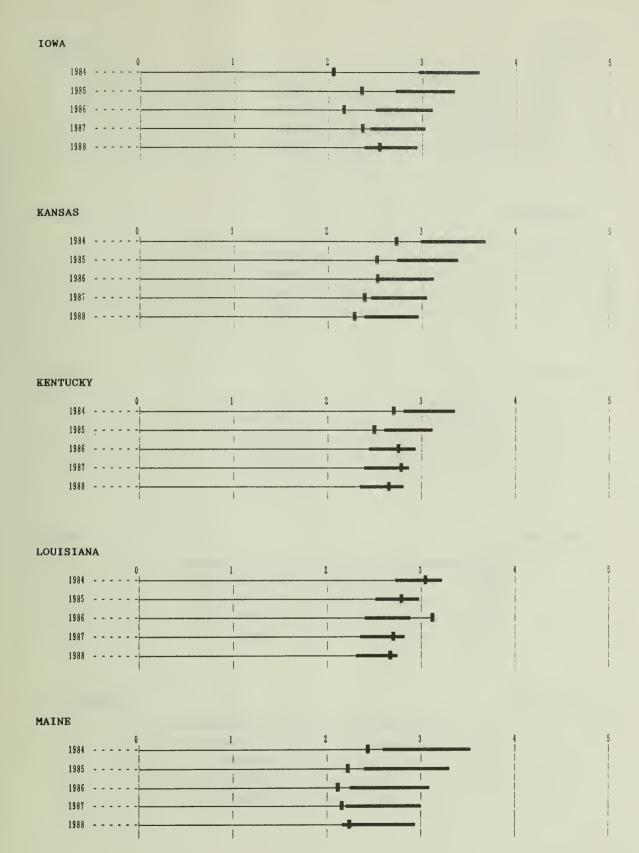


Figure 8 (continued) STATE FATALITY RATES (1984-1988)

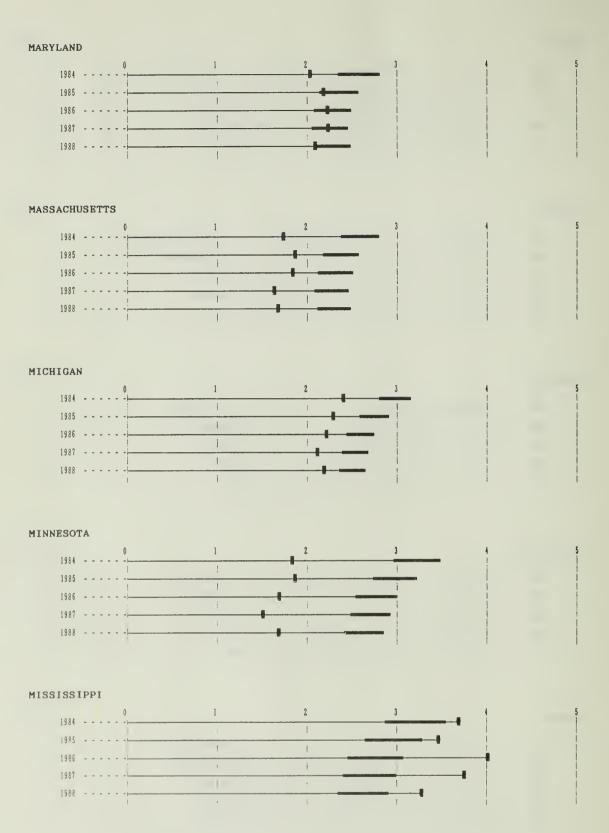


Figure 8 (continued) STATE FATALITY RATES (1984-1988)

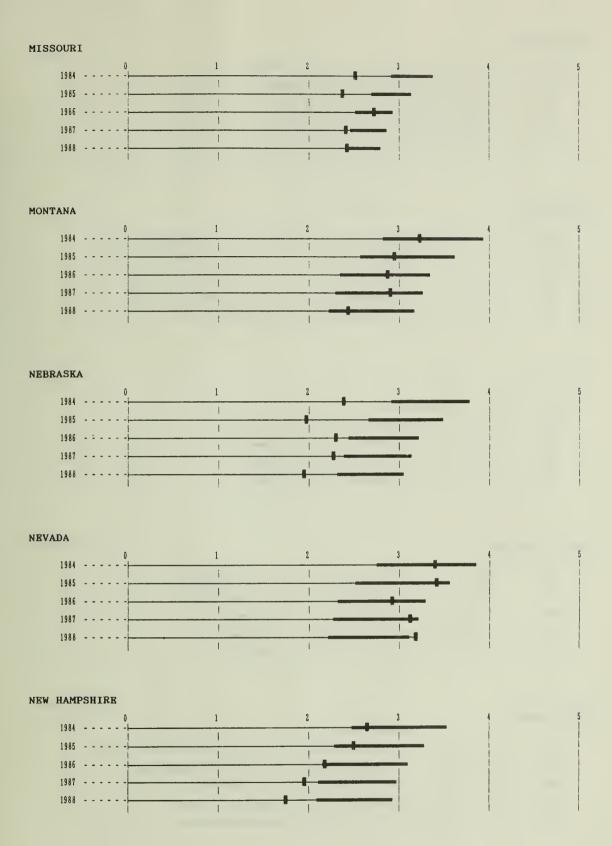


Figure 8 (continued) STATE FATALITY RATES (1984-1988)

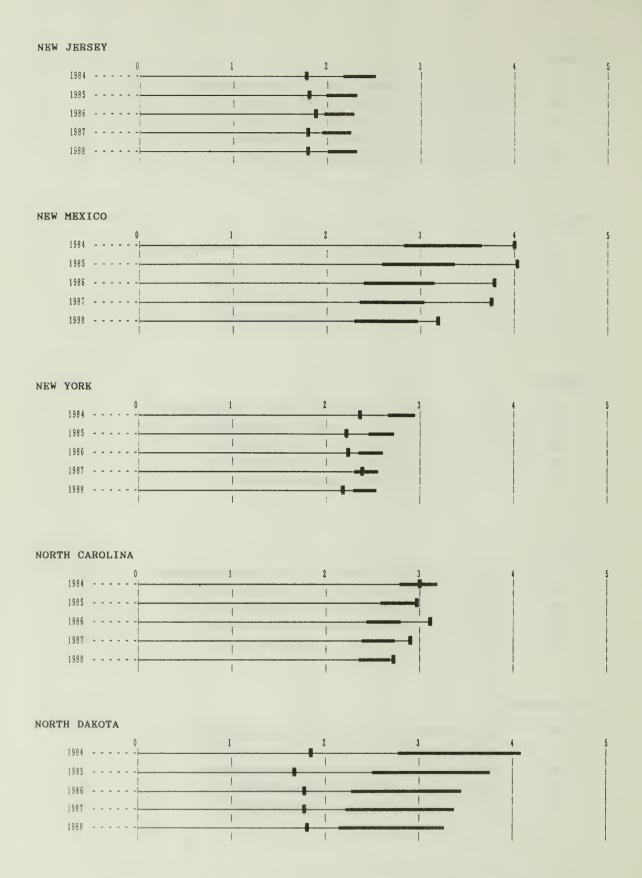


Figure 8 (continued) STATE FATALITY RATES (1984-1988)

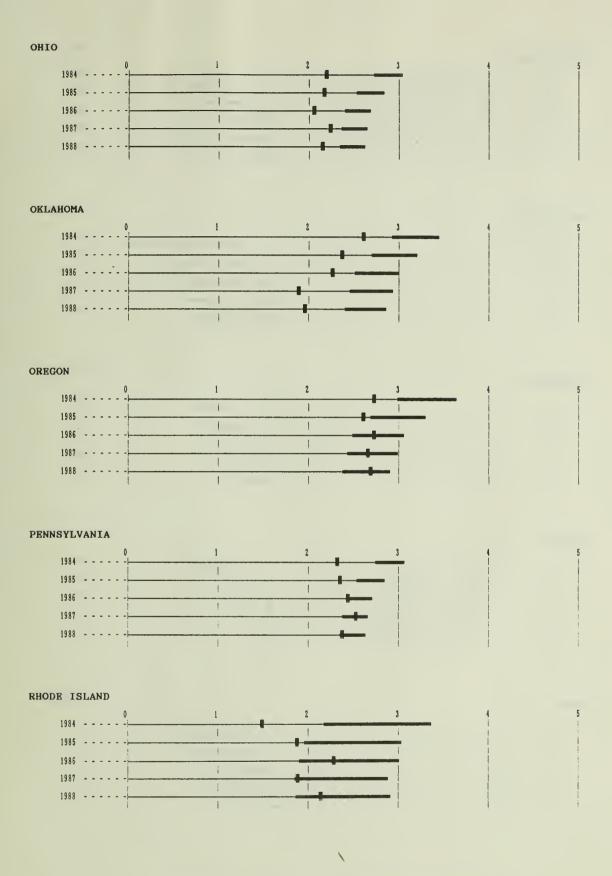


Figure 8 (continued) STATE FATALITY RATES (1984-1988)

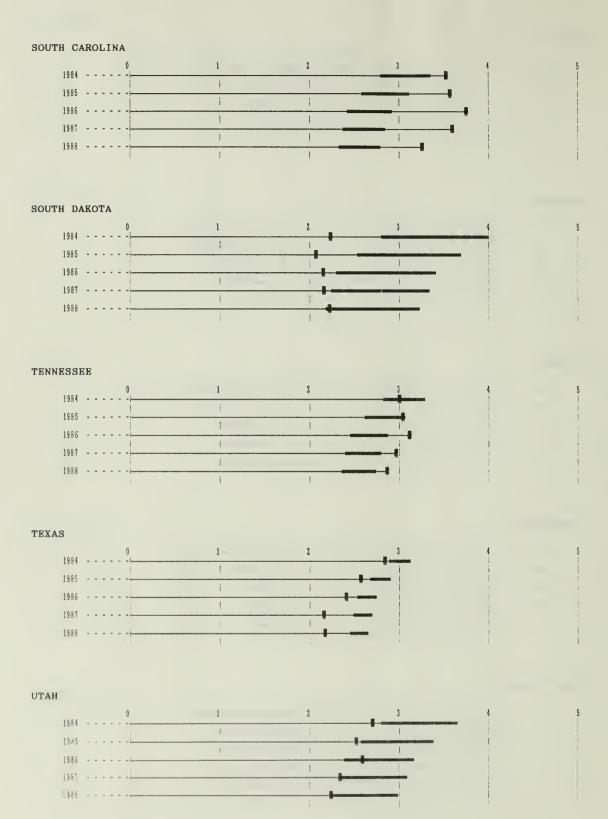


Figure 8 (continued) STATE FATALITY RATES (1984-1988)

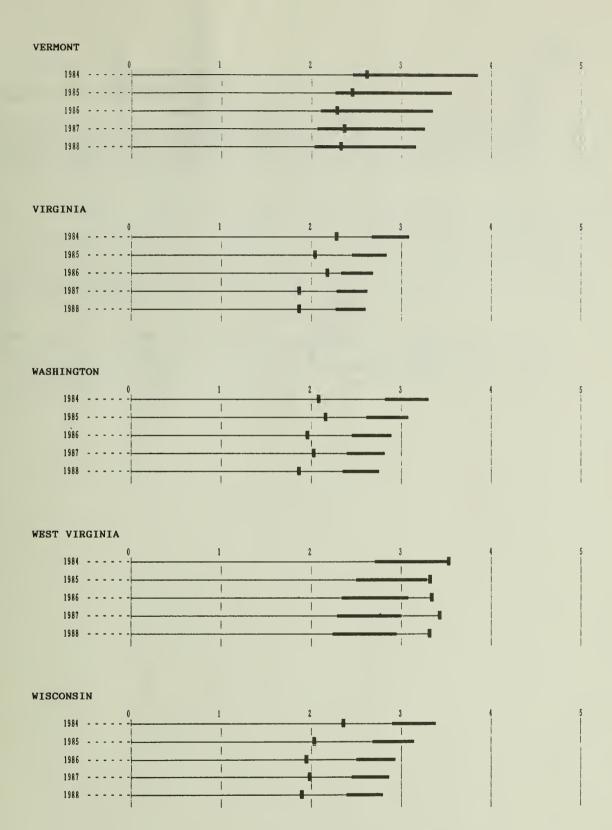
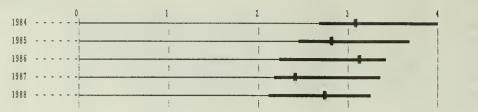


Figure 8 (continued) STATE FATALITY RATES (1984-1988)





LEGEND:
Reported fatality rate
Provisional range

Figure 8 (continued) STATE FATALITY RATES (1984-1988)

## SECTION VII--SUMMARY

This report presents data which can be used in the evaluation of the highway safety performance of the States. The data were submitted by the States through the Highway Performance Monitoring System operated by the Federal Highway Administration.

Table 1 contains travel and accident data by highway system for the United States. It is a summary of the detailed data contained in Tables 2 through 6. Estimates have been included where data reported by the States were incomplete. Only one State, Tennessee, was unable to submit any nonfatal injury accident data in time for inclusion in this report. South Dakota, South Carolina and North Carolina were unable to submit nonfatal accident data for each highway system in time for publication.

The traffic accident statistics for 1988 show an increase of about 700 fatalities over 1987. A disproportionate share of these fatalities occurred on non-Federal-Aid collector and local highways. The overall fatality rate per 100 million vehicle miles of travel was 2.32, which was lower than the record low of 2.41 set in 1987.

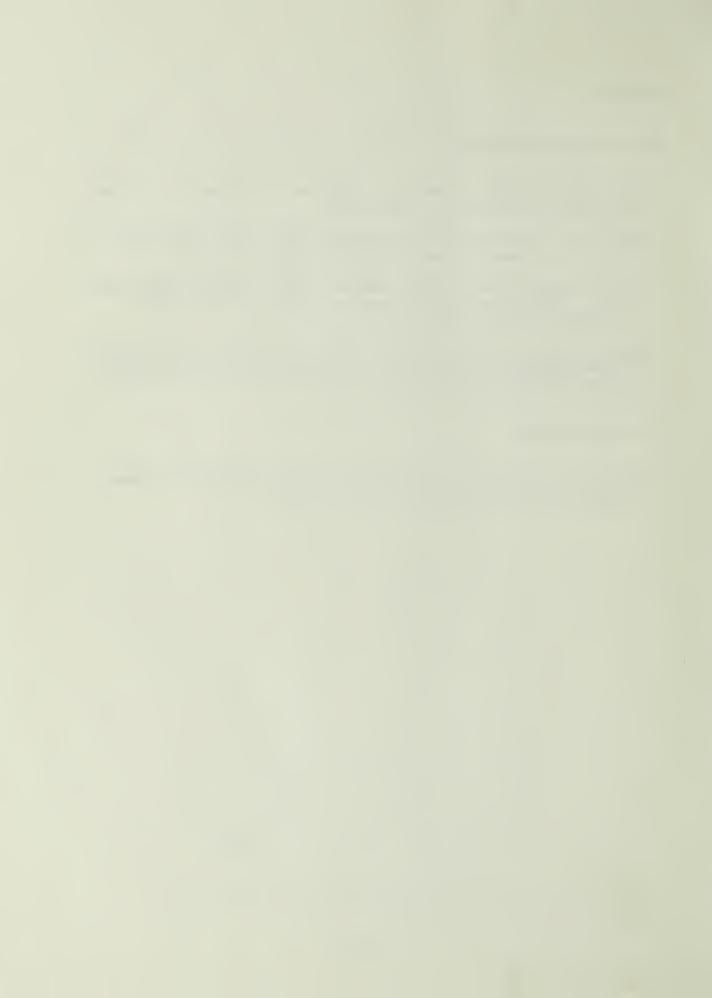
#### REFERENCES

# Rate-Density Relationships:

- Chatfield, Benjamin V., "Fatal Accidents and Travel Density," Highway Research Record 469, pp. 40-51, 1973.
- Smith, R.N., "Predictive Parameters for Accident Rates," California Division of Highways, Analytical Studies Branch, 1973.
- National Highway Traffic Safety Administration, "Highway Safety Needs Study 1981 Update of 1976 Report to Congress," October 1981, DOT-HS-806 283, pp. 72-73.
- Fee, Julie Anna, et al., "Interstate System Accident Research Study 1," Federal Highway Administration, U.S. Department of Transportation, October 1970, pp. I-14, 15, 42.

### Provisional Rates:

Morin, D.A., "Application of Statistical Concepts to Accident Data," Highway Research Record 188, 1967, pp. 72-79.







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